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Constructing a new measure of poverty for the UK

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Constructing a new measure of poverty for the UK

Thesis submitted for the degree of
Doctor of Philosophy
at the University of London

by

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Kristian Niemietz

Constructing a new measure of poverty for the UK

Abstract

This thesis will present a theoretical case for a new indicator of poverty, and construct a specific version of this indicator for the UK. It will calculate the actual poverty line, analyse its components, and discuss its implications.

The thesis will begin by demonstrating that the outcomes of poverty studies are highly sensitive to the choice the indicator. It will document the history of poverty measurement in the UK, concentrating on the interaction of theory and measurement in different periods. Since current poverty indicators are not strongly connected to the underlying living standards, this thesis will also provide a new account of how living standards of the least well-off have evolved over the past decades, concentrating especially on recent research findings on measurement issues in this field. This documentation prepares the ground for the actual poverty indicator to be constructed in later chapters.

The thesis will proceed to a discussion of the macroeconomic policy implications following from different poverty definitions, integrating the poverty literature into the wider economic literature. This step will identify the existence of problematic trade-offs in poverty policies, providing a case for scrutinising poverty indicators more carefully for their robustness and plausibility. It will move on to perform a 'robustness test' on existing measures, and highlight their shortcomings. The critique of existing measures will then be turned into a blueprint for the construction of an alternative measure.

This measure will then be constructed with data from a variety of sources. Its results will be presented, and its implications discussed.

Acknowledgements

I would like to thank both of my supervisors, Dr. John Meadowcroft and Prof. Ken Young, for their highly appreciated feedback and suggestions at various stages of this thesis.

DECLARATION BY CANDIDATE

I hereby declare that this thesis is my own work and effort and that it has not been submitted anywhere for any award. Where other sources of information have been used, they have been acknowledged. The thesis presented is the one upon which I expect to be examined.

During the course of writing this thesis, I have turned some of the intermediary findings into publications in peer-reviewed outlets; the most important ones being the two research monographs 'A new understanding of poverty' and 'Redefining the poverty debate', and the paper 'Measuring poverty: Context-specific but not relative' in the Journal of Public Policy. Overlaps between the thesis and these publications are inevitable, especially in the literature review passages. Nevertheless, every single one of them is a publication in its own right, and so is every single chapter in this thesis. This can be easily verified by cross-checking, and for this purpose, a list of all the major derived publications has been included below as part of this declaration. All of them are single-authored.

Journal articles:

Niemietz, K. (2010): 'Measuring poverty: Context-specific but not relative', *Journal of Public Policy*, 30 (3), 241-262.

Research Monographs:

Niemietz, K. (2011): *A new understanding of poverty. Poverty measurement and policy implications*, London: Institute of Economic Affairs.

Niemietz, K. (2012): *Redefining the poverty debate. Why a war on markets is no substitute for a war on poverty*, London: Institute of Economic Affairs.

Book chapters:

Niemietz, K. (2012): 'Armut im Westen: Der Mythos vom Globalisierungsverlierer', Chapter in Hoffmann, C. & P. Bessard (eds.): *Das Ende der Armut. Chancen einer globalen Marktwirtschaft*, Zurich: Edition Liberales Institut.

Niemietz, K. (2012): 'Armut in der Marktwirtschaft. Empirische Befunde', Chapter in Altmiks, P. & J. Morlok (eds.): *Noch eine Chance für die soziale Marktwirtschaft? Rückbesinnung auf Ordnungspolitik und Haftung*, Munich:Olzog Verlag.

Niemietz, K. (2011): 'Armut ohne Ende? Der Wohlfahrtsstaat schafft keine Wohlfahrt', Chapter in Hoffmann, C. & P. Bessard (eds.): *Sackgasse Sozialstaat. Alternativen zu einem Irrweg*, Zurich: Edition Liberales Institut.

Other articles:

Niemietz, K. (2012): 'Planning reform and housing costs: Why the coalition failed and what it means', *Economic Affairs*, 32 (3), 70–77.

Niemietz, K. (2012): 'Unicef conclusions on inequality ignore Unicef evidence of inequality', *Economic Affairs*, 32 (S3), 2-3.

Niemietz, K. (2011): 'An analysis of the welfare cuts in the Comprehensive Spending Review and the Budget 2010', *Economic Affairs*, 31 (1), 80-85.

Niemietz, K. (2009): 'Poverty in Britain, past and present', *Economic Affairs*, 29 (4), 48-54.

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Acronyms

AHC	after housing costs
BHC	before housing costs
BSA	Budget Standard Approach OR British Social Attitude Survey
DCLG	Department for Communities and Local Government
DWP	Department for Work and Pensions
EFS	Expenditure and Food Survey
FRS	Family Resources Survey
GDP	Gross Domestic Product
HB	Housing Benefit
HBAI	Households Below Average Income series
HMRC	Her Majesty's Revenue and Customs
LCFS	Living Cost and Food Survey
MBM	Market-Based Measure
OECD	Organization for Economic Cooperation and Development
ONS	Office for National Statistics
PSE	Poverty and Social Exclusion survey
PPP	Purchasing Power Parity
SDS	Secure Data Service
UNICEF	United Nations International Children's' Emergency Fund
VML	Virtual Microdata Laboratory

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1. Introduction: The measurement of poverty and why it matters

1.1 Introduction

Economic and social policies are frequently judged by their effect, actual or perceived, on the situation of the least well-off individuals in society. The impact on 'the poor' is one of the litmus tests of welfare reforms, labour market reforms, tax reforms, and indeed economic and social models as a whole. Meyer and Sullivan (2006, p. 1) go so far as to say: *"The change in poverty is relied upon as an indicator of success or failure of our economic system and government policies."*

A critical feature of poverty analyses is that their outcomes are strongly affected by the underlying definition of poverty itself. Applying two or more poverty definitions to the same dataset usually produces two or more very different poverty profiles. The definition does not only affect the poverty rate. More importantly, different measures differ in the population subgroups they identify as high-risk groups, in the time trend they display, and in the socioeconomic variables they are correlated with (more on which in subchapter 1.3). The same welfare reform, tax reform or labour market reform that is associated with a fall in poverty as measured by one indicator can be associated with a rise in poverty as measured by a different indicator. They therefore produce very different 'narratives' of how poverty has evolved over different periods, and why. Ultimately, they can lead to very different policy implications.

But what does 'poverty' mean in the first place, in the context of contemporary developed countries? Traditionally, poverty has been understood as a lack of resources necessary to fulfil essential physical needs, such as nutrition, shelter and clothing. The research of Charles Booth and Seebohm Rowntree in the late 19th and early 20th century, which represents early attempts to systematically measure poverty in Britain, was based on this understanding (e.g. Rowntree, 1922). In research covering the world's least developed countries (LDCs), poverty is still understood as related to physical functioning. The $1-a-day standard (nowadays mostly replaced by a standard of 1.25 International Dollars), traditionally the most common measurement of poverty in LDCs, was originally proposed

on the grounds that it broadly corresponded to a minimum quantity of core physical necessities (see Ravallion et al, 1991).[1]

But such a concept of poverty is only applicable up to a certain level of economic development. Internationally, poverty as measured against the $1.25-a-day standard falls steeply with rising GDP per capita, even if there is substantial variation in poverty rates at a given level of GDP. Beyond levels of roughly $15,000 (in International Dollars), subsistence poverty rarely occurs at all (based on data from the World Bank, 2011).

This is true for cross-country comparisons at a single point in time, but also for within-country time series. In recent decades, a number of countries have eradicated, or come close to the eradication, of subsistence poverty. Chile and Malaysia achieved this in the mid-1990s; Mexico, Thailand and Costa Rica achieved it in the early to mid-2000s, and Brazil is currently on the verge of achieving it (based on data from the World Bank, 2011). It is striking that in each of these cases, the near-eradication of subsistence poverty occurred when the respective country had reached a level of GDP per capita which was broadly equivalent to the British level of the early 1950s (author's calculation; based on data from Maddison, 2008, and World Bank, 2011). This was precisely the period in which subsistence poverty measurement was abandoned in the UK, on the grounds that the last Rowntree study had found subsistence poverty to be on the verge of disappearance (more on which in Chapter 2). Poverty rates are not simply a function of GDP, but the mentioned level seems to mark a critical threshold. When countries reach a level of development comparable to the British level of the early 1950s, the eradication of poverty in the most basic sense comes within sight.

However, poverty indicators commonly applied to developed countries do not attempt to measure subsistence poverty. They differ both from the ones commonly applied to LDCs, and from the Rowntree-style indicators that were applied to developed countries in the past – not merely in the sense of being more encompassing, or concerned with a less severe form of poverty. They attempt, as will be shown below, to approximate a different underlying concept: one related to social participation, or the ability to comply with the social customs prevailing at a particular time and place. In this framework, an individual who experiences no difficulties in obtaining the means necessary for physical functioning, but who is unable to engage in many customary social activities, would still be classified as poor.

[1]The authors also found that the $1-a-say standard approximated many domestic poverty indices used in LDCs.

The underlying concept of poverty involved is therefore a much more abstract one. Rowntree's indicator could rely, for a good part, on highly tangible measures. The food component of his indicator was meant to reflect a consensus among nutrition scientists on what constituted a minimum nutrient intake for a healthy diet (Rowntree, 1922, p. 88-106). The original $1-a-day poverty line had a similar underpinning. There is no obvious equivalent for the much more abstract concept of 'social participation'. As Kenworthy et al (2009, p. 2) note: *"Once societies move past subsistence levels, there is no non-arbitrary "minimal" standard of living."*

An entirely non-arbitrary standard there may not be, but this thesis will argue that existing poverty measures are not just arbitrary, but fundamentally flawed in several ways, and that these flaws undermine their capacity to produce sensible policy recommendations for tackling poverty. This thesis will argue that it is both desirable and feasible to establish a poverty measure which is a lot less arbitrary, a lot more informative, and a lot more plausible than any of the existing ones. This thesis will develop a novel critique of existing poverty measures, which it will then turn into a requirements catalogue for a new type of poverty measure. It will establish a measure which fulfils these requirements, first on an abstract and general level, and then with actual UK data. This will produce a measure which is able to detect drivers of poverty that current measures are oblivious to, a measure with which more cost-effective anti-poverty policy strategies can be identified. If more widely adopted, a poverty measure of this type could reorient poverty research and the wider poverty debate.

1.2 What this thesis will add

The remainder of this chapter will demonstrate how the level, trend and risk group identification in a poverty study depends critically on the choice of the poverty indicator. This has been shown many times before for comparisons of particular indicators applied to particular years and particularly countries, but this chapter will show that it is a *universal* property of poverty measurement. The choice of the indicator is decisive for the outcomes, but this is rarely explicitly recognised in the poverty debate, where the poverty rate produced by a specific measure is often simply reported as 'the proportion of people living below the poverty line', or '... living in poverty'.

Chapter 2 will go on to explain how the understanding of poverty in the developed world has changed over time, why this change has occurred, and what the consequences were, focussing mainly on the situation in the UK. This chapter will argue that in the UK, the change in the measurement of poverty has influenced perceptions of the topic, giving rise to a specific 'poverty narrative' which could not have arisen without a prior change in poverty measurement. While the statistical indicator behind the term 'poverty' had changed, the connotations that the term evoked had not, or only to a much lesser degree. This leads to frequent misunderstandings.

One of the salient features of contemporary poverty measures is that they have become largely detached from the underlying living standards of people at the lower end of the income distribution. Poverty rates as such do not contain information on what it is these people can or cannot afford. Chapter 3 will therefore document how living standards of the least well-off have evolved in recent decades, according to a wide variety of indicators. It will not produce much original data, but it will produce an account which will be novel as a 'package', because it will not just bring disparate indicators together, but also show how they can complement each other and why they sometimes seem to contradict each other. In this sense, Chapter 3 is a more comprehensive account of British low-earners' living standards than what can currently be found in the literature. Chapter 3 will offer a discussion of living standards as such, not benchmarked against any poverty line, but it will nevertheless prepare the ground for the development of a new poverty measure later on. Among other things, Chapter 3 will show how multidimensional living standards really are. They do not simply 'rise' or 'fall'; rather, improvements in some respects can coincide with stagnation or deterioration in other respects. No single poverty indicator could possibly capture all of this information single-handedly, but by then, it will have become clear that contemporary measures do not even come close. Thus, even though Chapter 3 will not discuss poverty per se, it will provide the underlying information on the living standards of the least well-off which a more discerning poverty measure should be able to capture. It thereby defines a benchmark against which poverty indicators will later be judged.

But before that, Chapter 4 will discuss the macroeconomic policy implications that follow from different poverty measures, beginning with a review of the econometric literature which seeks to identify the determinants of poverty rates. The question of this chapter is not whether different poverty measures can identify different driving factors – that much is

obvious; it simply follows from the way these measures are mathematically constructed. But the relevant question is whether the policy implications following from different poverty measures are merely different, or whether they can be actively in conflict with one another. There are studies on the determinants of relative poverty rates which argue that this is not the case, and that the determinants of relative poverty largely coincide with the determinants of poverty more generally. Chapter 4 will challenge this argument. It will do so by integrating the literature on the determinants of relative poverty into the wider literature on the determinants of economic performance. The poverty literature and the economic literature often appear to be 'talking past each other', and Chapter 4 will act as an 'interpreter' between them. It will thereby begin to bridge the gap between the two, which will put a new complexion on both, but especially on the literature on relative poverty. It will emerge that the outcomes of these studies are not as easily generalisable as their authors imply. These outcomes are typically derived from small country samples, and are prone to extrapolating too much from regional particularities. They produce findings which are at odds with large sections of the wider economic literature, and Chapter 4 will show that this is not a coincidence. On the whole, Chapter 4 will come to conclusions that are quite different from the ones that the poverty studies draw. Chapter 4 has important implications for the remainder of the thesis. If anti-poverty policies did not involve any trade-offs, the accuracy and plausibility of a poverty indicator would not need to be especially high. Even a flawed poverty measure could then produce sensible recommendations. But once the existence of trade-offs and potential conflicts of objectives is acknowledged, the bar has to be raised. Poverty measures then have to satisfy higher quality standards, because errors are no longer 'costless'.

Chapter 5 will assess the quality of current poverty measures, with a particular emphasis on relative measures as they are most widely used in poverty research. Critique of relative measures is far from new, but as Chapter 5 will show, previous critiques have often missed the point, because they have failed to engage with the theory behind relative measures. Chapter 5 will develop a critique of relative measures from a completely different angle, which is novel in two ways. Firstly, it will draw a strict distinction between the theory and the measurement of relative poverty by referring back to the history of ideas already documented in Chapter 2. The poverty literature often conveys the impression that once poverty had become redefined to mean a form of social exclusion rather than physical deprivation, the adoption of relative measures was only a technical detail. Chapter 5 will

challenge this interpretation. It will show that relative poverty measures as we know them today were just one among many possible specifications of a much more general theory. There was no automatism which had to lead to the adoption of relative measures; rather, the same broad concept of poverty could have been approximated in many other ways. Chapter 5 will go further and also argue that relative measures are a flawed approximation of this wider idea. In other words, the novelty here is that this is a critique 'from within': Relative indicators will be judged by *their own* standards, whereas conventional critiques have generally judged them by the standards of some entirely different theory of poverty. The second novelty of Chapter 5 is that it will integrate two hitherto separate strands of literature: the literature on relative poverty and the literature on the determinants of self-reported 'subjective well-being'. The latter explicitly investigates the importance of relative income and absolute income, so it could potentially inform the poverty literature – as long as a number of caveats are kept in mind. Chapter 5 will show that these two strands of literature are not natural complements, so integrating them is not a straightforward process.

Chapter 6 goes on to extend the critique of relative measures to the conventional alternatives. It will show that these alternatives either fail on similar grounds, or in other ways. Chapter 6 will develop criteria for the assessment of a poverty indicator's quality, thus crystallising the insights from Chapters 2, 3 and 5 into a requirements catalogue. Conventional poverty measures do not meet these requirements, neither on their own nor in combination. Chapter 6 will proceed to discuss two relatively recent developments from poverty research, both of which fulfil some of the criteria in the catalogue while failing on others. It will then show that the strong elements of both approaches can be blended into a novel measure of poverty: a priced basket of consensually defined necessities. Surveys that seek to establish a consensus on what constitutes necessities in the UK today already exist; and priced baskets also exist, derived through qualitative research methods (i.e. focus-group discussions). But these two approaches have never been brought together. There is currently no priced basket reflecting a broad consensus, established in large-scale surveys, on what constitutes necessities. This thesis will construct such a measure.

Chapter 6 provides the template for the new measure. Chapter 7 will use this template to build an actual poverty line with real-world figures from scratch. It will draw on confidential data accessed through the Secure Data Service (SDS) and the Virtual Microdata Laboratory

(VML). It will also draw on publicly accessible data from the Government Statistical Service (GSS), the Office for National Statistics (ONS), Local Housing Allowance Direct (LHA), the British Insurance Premium Index (BIPI), the public transport providers of twelve large and medium-sized cities, the Joseph Rowntree Foundation, and Statistics Canada. It will construct eight different sub-poverty lines, and discuss the most important ones among them separately.

Chapter 8 will present the total poverty line, which is the sum of the sub-poverty lines constructed in Chapter 7. It will discuss the results, including the possible policy implications, and put them into context.

Having developed and discussed a new poverty measure, Chapter 9 will discuss the next steps that should be taken from there, especially in poverty research but also in policy making. It will show how this new measure could be improved further if the research funding was available, and how it could then be integrated into poverty research. The thesis will end with a conclusion.

Needless to say, the discipline of poverty research is infinitely broader than what this thesis can cover. A number of important issues will be excluded from the thesis, or only mentioned in passing. Topics which this thesis will *not* address, despite their obvious relevance, include:

- the divisive issue of 'structure vs. agency': Is poverty primarily a function of the economic system, or do behavioural explanations play a role?
- social mobility issues, both intra-generational and inter-generational.
- the question of whether poverty alleviation is only an end in itself, or whether poverty is also causally related to social problems such as crime.
- the role of education and (vocational) training in poverty alleviation.

In short, the thesis will be relatively broad, but nowhere near exhaustive.

Before anything else, the next subchapter will explain the workings of the commonly used contemporary poverty measures. There will be an emphasis on separating inherent aspects, which are part of an indicator's definition, from aspects that represent common usage but

which could, in principle, be altered. Different classification systems will show how these measures differ and what they have in common.

1.3 Contemporary poverty measures defined

Before reviewing the empirical literature using different poverty measures, it is first necessary to define these measures themselves. This sub-chapter explains the most common approaches to poverty measurement, which are relative poverty (RP), subjective poverty (SP), absolute poverty (AP) and material deprivation (MD). Within each of these approaches, there can be substantial differences depending on the precise specification of the indicator. The definitions are partially based on the World Bank's manual on poverty research (Coudouel et al, 2002), but mostly on how they are actually used in the literature itself. This will become clearer in subchapter 1.3, where examples for each of the concepts will be presented.

Relative poverty (RP)

Indicators of relative poverty (RP) are based on the income distribution within a pre-defined geographic area, which is almost always the nation state. Living standards are approximated by disposable cash income, or, much less frequently, by expenditure, but this is not a defining feature. Other approximations are imaginable.[2] 'Income', in this context, does not denote nominal but 'equivalised' household income. Equivalisation is the process of making household incomes comparable across different household types. Household incomes are converted to a common basis by attaching different weights to each household member. The aim is to account for economies of scale in household consumption, resulting from the shared use of resources such as housing space and household appliances. It also accounts for differences in consumption levels between adults and minors, and sometimes between minors of different ages. There are several equivalence scales, which differ in their assumptions about the extent of economies of scale in household consumption, and how they relate to the age of the household members. Equivalence scales also differ in their degree of differentiation. The OECD equivalence scale, which assigns the same weight to each child, can be seen as representing the simpler end of the spectrum. The McClements

[2]There are various attempts to estimate the fungible value of public benefits in kind, or imputed values of owner-occupied housing, and add these values to income. These approaches and their difficulties will be further explored later. See Wolff (2009) for an overview.

equivalence scale, which has been used in official income and poverty statistics in the UK until very recently, would then represent the more complex end of the spectrum. It splits children into seven different age groups, and attaches a different weight to each (ONS, 2008, p. 32). Under the McClements scale, a two-adult household earning £X is assumed to attain the same living standard as a single household earning 0.61 * £X, as a household of two adults and one adolescent earning 1.36 * £X, or as a household of two adults and one young child earning 1.21 * £X. The two-adult household is the reference category, so that in a hypothetical society consisting only of two-adult households, nominal and equivalised incomes would be identical. The appropriateness of equivalence scales is a matter of debate. Saunders (2009, pp. 8-9) has criticised equivalence weights as arbitrary. Blackburn (1998, pp. 461-462), in contrast, complements a poverty study by a sensitivity analysis using various equivalence scales, and finds that it has no substantial impact on the results for most countries.

Incomes are usually averaged over a period of one year, although this is not a defining feature either; it is merely explained by the fact that most income statistics are also gathered on an annual basis. Yet the time period is alterable. What defines RP indices, as mentioned, is that they set the poverty line as a fixed fraction of central tendency, which is meant to be an approximation of 'typical' living standards at a particular time and place. In earlier RP studies, the usual measure of this was the arithmetic mean (Atkinson, 1998, p. 2), though later the median become the more common one. Income distributions are not symmetric but positively skewed, since there is an obvious lower bound[3] but no upper bound. The mean will therefore always exceed the median, which means that it will always exceed the incomes of more than half of the population. If the difference between the mean and the median is large, the mean will exceed the incomes of the vast majority of the population, which makes it unsuitable to approximate typical living standards. Since the mean includes all incomes, even the most atypical ones, it can be sensitive to a small number of very high values. A small number of individuals with very high incomes can therefore have a strong impact on the mean, even though they are unlikely to have a strong impact on perceptions of what constitutes a 'typical' living standard. The median avoids this problem. Since it is the income of the household at the mid-point of the distribution, it can, by definition, never exceed the incomes of more than half of the population.

[3] One could, in theory, imagine poverty statistics taking account of 'negative incomes', such as losses of the self-employed. But income statistics are not gathered in this format. Negative incomes are set to zero, making zero the lower bound.

Since it is unaffected by outliers, the median is a more suitable representation of typical living standards (Saunders and Smeeding, 2002, pp. 1-4). This does not mean that the median is an entirely unproblematic measure. Easton (2002, pp. 6-7) points out that a reduction in the tax burden of top-earners, coupled with an increase in the tax burden of median income earners, can produce falling poverty rates if the poverty line is pegged to median incomes. The higher tax burden leads to a reduction in median disposable incomes, which, in turn, leads to a reduction in the poverty line. If incomes just below the poverty line are unchanged, or decrease by less than the poverty line, the poverty rate would fall. This would not have happened if the poverty line had been pegged to the mean instead of the median. Unlike the median, the means records the reduction in the tax burden of high-income earners, and the ensuing increase in their disposable incomes. Therefore, if the tax reform is revenue-neutral, mean incomes will remain unchanged, and so would a poverty line pegged to the mean.

However, while the latter scenario is merely a statistical possibility, the standard objection to the use of the arithmetic mean applies universally. Mean incomes are above median incomes in every single OECD country (see OECD, 2008, p. 30).[4] Since median incomes are always below mean incomes, the replacement of the mean with the median has been accompanied by the choice of a higher threshold: 50% of the mean has been replaced by 60% of the median as the most common poverty line in RP statistics.

The poverty rate, or the headcount measure, can be complemented by a measure of the depth of poverty, usually the 'poverty gap' index which measures how far below the poverty line the average incomes of the poor are. The poverty gap, originally devised by Sen (1976), is the percentage point distance between the average income among the poverty population and the poverty line. The purpose of the poverty gap measure is to make poverty statistics less reliant on the poverty threshold chosen. Poverty rates only detect movements across the poverty threshold, but no movements below or above it. So the poverty rate can record drastic falls if large numbers of households moved from just below to just above the poverty line, even if their incomes had barely changed. By the same token, if large numbers of households moved from far below the poverty line to just below, but no household actually crossed it, the poverty rate would remain unchanged. In both

[4] The median-to-mean ratio can itself be used as a rough measure of income inequality, since a large deviation indicates a more skewed income distribution. The ratio is lowest in Sweden, Finland and France, at just over 0.95.

cases, the additional information provided by the poverty gap can rectify the picture: The latter situation would result in a decrease in the poverty gap; the former situation would result in an increase, as the remaining poverty population would now be further away from the poverty line. A less common alternative consists of looking at a range of poverty thresholds instead of a single one, for example by adding an upper bound and a lower bound. The evolution of poverty against the conventional threshold of 60% of the median could then be complemented by e.g. the rates resulting from additional thresholds at 50% and 70%. The poverty gap and the poverty rate can be integrated into a composite measure, which can be augmented by a measure of inequality among the poor (Sen, 1976).

Absolute poverty

Indicators of absolute poverty (AP) are characterised by poverty lines that represent a fixed level of purchasing power, or command over material resources. The poverty line is not connected to average living standards, so the poverty status of a given individual does not depend on the incomes of other individuals. Under an AP measure, individuals whose incomes are equal to the poverty line always enjoy the same material living standard, even if it is a cross-country study covering very different societies, or a time series study covering a long period.

There are different ways of deriving AP lines. An AP line can refer to a living standard which is interpreted, by some criterion, as an 'objective' minimum standard. In this case, there would be some underlying theory of poverty, i.e. an explicit reason why a living standard below this threshold should be labelled 'poverty' and a living standard above should not. The already mentioned Budget Standard Approach pioneered by Seebohm Rowntree falls into this category. Here, the poverty line has a clear interpretation: It is equal to the cost of a pre-selected consumption basket. Thus, in this framework, 'being poor' means being unable to afford the basket. A similar logic applies to the World Bank's $1-a-day standard. However, the BSA is not by definition an absolute measure. If the content of a BSA basket was, in some way, linked to a representative consumption basket for middle-income earners, it would effectively produce a measure of RP. No such 'relative BSA' measure currently exists, but considering the theoretical possibility is a way of separating accidental from defining features.

In research referring to contemporary developed countries, the use of AP lines is less frequent, but when they are used, they seldom have an interpretation of their own. In time

series analyses, they are typically derived from the RP line of one particular year, which is held fixed in real terms and applied to subsequent years (see DWP & ONS, 2009, pp. 41-53; OECD, 2008, pp. 129-130). Technically speaking, this simply means decoupling the poverty line from median incomes and coupling it to the Consumer Price Index instead. A RP line is thus converted into an absolute one, because from now on, it no longer responds to changes in the living standards of others but always represents the same constant living standard. Similarly, in cross-sectional analyses, the poverty line can be 'borrowed' from one country and applied to others. In such cases, the poverty line is adjusted for differences in purchasing power, but not for differences in average incomes (e.g. Smeeding, 2006; Notten & Neubourg, 2007).

In both cases, whether it is borrowed from a particular year or from a particular country, the resulting AP rate has no interpretation of its own. There is no reason why a poverty line equal to 60% of the median income of a different country, or a year in the past, should have any particular meaning here and now. In both cases, the purpose is simply to derive a common standard representing a constant level of purchasing power, independent of the year or the country. Such 'frozen' or 'borrowed' poverty lines will subsequently be called 'quasi-absolute'.

AP is often used as a synonym for 'extreme poverty' (Brady, 2003, pp. 8-10; European Commission, 2004; Pickett and Wilkinson, 2007, p. 6; New Policy Institute & Joseph Rowntree Foundation (n.d.)). This may be a reflection of the fact that the use of AP lines is much more frequent in research covering developing countries, or developed countries in the past, rather than contemporary developed countries. But it is not part of the definition of AP. Interpreting AP as 'extreme poverty', and RP as 'moderate poverty', confounds to distinct categories. The absolute/relative distinction contains no information about the 'generosity' of the poverty line, or the severity of the poverty concept examined. An AP line can easily be higher than an RP line. In time series studies, this occurs whenever real median income falls after the year in which the RP line is converted into an AP line. In cross-country studies, this occurs whenever the poverty line of a wealthier country is applied to a less wealthy one. The 'borrowed' AP line can then be higher than the domestic RP line, leading to AP rates exceeding RP rates. Several authors have used the PPP-adjusted AP line of the United States to compare AP rates across OECD countries (Scruggs & Allan, 2006; Smeeding, 2006; Notten & Neubourg, 2007). For countries with mean/median incomes substantially below the US level, the resulting AP rates exceed RP rates, because the PPP-

adjusted US poverty line exceeds 60% of the domestic median (or 50% of the domestic mean).

An even starker example is Eurostat's (2008, p.44) €10-a-day poverty line. It is a minimalistic standard for Western Europe, which is why it produces poverty rates close to zero there, but it is much higher than domestic RP lines in most of Eastern Europe. It therefore produces poverty rates of close to 30% for Poland, and close to 40% for Lithuania and Latvia. The real difference between AP and RP, in this regard, is not that AP is less generous but that it is less bounded. AP measures cover the full range; they can produce poverty rates between 0% and 100%, while RP measures are much more bounded both upwards and downwards. RP rates below 10% or above 30% (against a threshold of 60% of median income) are theoretically possible, but do not currently exist anywhere (OECD, 2008; OECD, 2011),[5] as they would require an extreme shape of the income distribution.

An AP line that is derived from a basket of necessities need not be minimalistic either, it can even be very encompassing – this simply depends on how encompassing the basket is. Examples for encompassing baskets are hard to find, as they are very rare in practice, but they do exist: The Canadian 'Market-Based Measure', compiled by Statistics Canada, is a poverty index based on the cost of pre-defined basket of consumer goods. It is 'absolute' in the sense that its poverty line corresponds to a constant material living standard, which is not affected by average incomes in Canada. But it produces a higher poverty rate than its relative counterpart, because the constant living standard it represents is itself a very high one (Human Resources and Social Development Canada, 2008).

Like RP, AP measures also approximate living standards by income, or less frequently, expenditure. Incomes are equivalised to adjust for differences in household size and composition, in the same way as with RP figures. Poverty gap or composite measure can be derived in the same way as for RP.

Subjective poverty

Subjective poverty (SP) indices derive poverty lines from large-scale surveys. Their rationale is to overcome the arbitrariness of both absolute and relative poverty lines. There are two

[5]Having said that, one study by Eurostat (2008) finds a poverty rate minimally below 10% for Sweden and the Czech Republic. The difference with the OECD figures is explained by the equivalence scale.

quite distinct approaches which, in the empirical literature, both come under the header of SP. They will be treated separately here, and examples of both will be provided later.

The first concept is one which could also be called 'self-assessed poverty', because they are the result of surveys in which every respondent selects their own poverty status. Respondents are classified as poor when they consider themselves poor. In this version of SP, there is no poverty line and no equivalisation, because no measure of household income or spending is included. There is no poverty gap either, but some differentiation among the poor remains possible. Households can be asked to classify themselves as e.g. 'moderately poor' or 'very poor'.

The second variant of SP could be labelled a 'majoritarian' or 'democratic' poverty line. As before, respondents are asked whether or not they consider themselves poor, but in this version, they are not classified according to their self-assessment. Instead, income and self-assessed poverty status are plotted against one another, to check whether there is a point of inflection in the income distribution below which most respondents consider themselves poor, and above which most consider themselves not poor. This inflection point is then used as a poverty line, and respondents are classified accordingly by their income. An alternative within this category consists of asking respondents what they consider to be the minimum income necessary to maintain a minimum decent standard of living in their country of residence. The responses are then averaged into a so-called 'consensual poverty line'. This can be done separately for different household types, in which case no equivalisation is required (it results in an implicit equivalence scale, but it is not a fixed one). Poverty gaps can be derived in the same way as for RP and AP. The majoritarian approach classifies all respondents by the common standard they have collectively agreed upon, whereas under self-assessment, each respondent sets their own standards. In a hypothetical society in which all individuals had identical views on what constitutes poverty, both approaches would yield identical results.

Material deprivation (MD)

The term 'material deprivation' (MD) refers to a class of indicators which attempt to measure involuntary lack of goods and services. Respondents are presented with a pre-defined list of items, and asked whether they lack any of these. In some versions, those who lack items are also asked whether they lacked it because they could not afford it, or because they did not want it. There is some similarity with the already mentioned Budget

Standard Approach, but the crucial difference is that MD measures rely on respondents' self-assessment rather than an observable measure of living standards like income.

MD poverty studies use a poverty line, too, but it is not a monetary one. Respondents are classified as poor when they lack more than a pre-defined number of items, e.g. more than two. One variant of MD attaches different weights to each item, based on how many households lack this item overall. The assumption behind this is that lacking an item which most households possess is a more severe form of deprivation than lacking an item which many other households cannot afford either. This method results in a 'deprivation score', which is the weighted number of missing items, with the poverty line also defined as a minimum deprivation score rather than a monetary value. The average deprivation score among the poor can be seen as the equivalent of the poverty gap measure.

Occasionally, one finds indicators that measure lack of consumer items in a particular category (e.g. New Policy Institute/Joseph Rowntree Foundation, 2009), which one could view as partial MD measures.

Table 1.1 contains the most common categories of poverty concepts, and distinguishes them by how they approximate living standards, how the set the threshold which separates the poor from the non-poor, and how they can account for differences in the severity of poverty.

Table 1.1: Four common poverty measures, compared according to three key criteria

		Proxy measure of living standards	**Poverty line**	**Proxy measure of the depth of poverty**
Relative poverty		Income or expenditure	Fixed fraction of central tendency	Poverty Gap
Absolute poverty		Income or expenditure	Fixed real income level	Poverty Gap
Subjective poverty	**Majoritarian**	Income or expenditure	Majority decision	Poverty Gap
	Self-assessed	Self-assessed	not applicable	Self-assessed
Material deprivation		Reported consumption	Fixed number of missing consumption items or deprivation score	Average deprivation score among the poor

There are alternative ways to categorise poverty measures. Boarini and d'Ercole (2006, pp. 11-12) distinguish between 'input-based' and 'outcome-based' measures. The former concentrate on indirect, observable measures of living standards, such as income or

expenditure. The latter attempt to measure living standards in a more direct way. Differences can occur when there are substantial differences in the 'transmission rate' of inputs (like income) into outcomes (living standards). Two households with identical incomes may differ in other, unobserved variables that still make them end up with very different living standards. Special needs would be a possible reason. Differences in non-market access to goods and services (e.g. childcare provided through the extended family) would be another one. An altogether different explanation refers to the labour market instead of the product market. Even if the transmission rate of income into living standards was the same for all households, a case can be made for indirect measures when labour markets are less formalised, which makes income data difficult to record. Yet as long as the provision of most goods and services is mediated through markets, and most labour activities take place in the formal labour market, input-based measures are generally preferred, because of their greater precision.

The categorisation of Boarini and d'Ercole can be extended to the poverty measures mentioned above. RP, AP and majoritarian SP would then be classified as input-based measures. They rely on indirect measures of living standards, such as income or expenditure. MD and self-assessed SP are outcome-based measures, as they rely on respondents' own assessment of their living standards. No information is required on *how* a household manages to obtain all the items on the MD list, or on *why* a respondent does not consider themself poor. Only a final outcome is recorded. Table 1.2 provides a brief summary.

Table 1.2: Input-based vs. outcome-based poverty measures

Input-based measures	Outcome-based measures
Relative poverty	Material deprivation
Absolute poverty	Self-assessed subjective poverty
Majoritarian subjective poverty	

Neither category of indicators is definitely superior to the other. The strength of input-based measures is that they use observable, verifiable and relatively precise data. Their weakness is that they are partial measures which are prone to miss many subtleties. For outcome-based measures, it is the other way round: A variety of unobservable determinants of living standards can be accounted for, but the results are neither precise nor verifiable.

Finally, it is the distinction between absolute and relative poverty measures which has probably been the most controversial subject in poverty research (see for example Sen, 1983; Townsend, 1985; Sarlo, 2008, pp. 1-5, Clark et al, 2006). In this debate, AP and RP are often plotted against each other as polar opposites, but it is more expedient to think of this distinction as a continuum. Depending on their specification, RP measures can become more similar to AP measures and vice versa. Once this is taken account of, SP and MD measures can also be categorised within this framework: They remain concepts in their own right, but depending on their specifications, they can develop strong relative or strong absolute properties. Table 1.3 summarises these considerations.

Both RP and AP measures can be 'more relative' or 'more absolute' depending on the frequency with which they are updated. AP lines are fixed in the short term, but they too are updated eventually. An example is the UK government's AP target for child poverty. It was originally defined against a poverty line equal to 60% of the real median income in 1998, now replaced by real median income in 2010. So while a RP line changes in line with median incomes in every single year, this poverty line has changed in line with median incomes after twelve years, which is a difference of degree rather than principle. Geography can also blur the distinction between RP and AP, a good example being Eurostat's (2008) pan-European poverty line. Eurostat shows (albeit only for one single year) what relative poverty rates would look like if the poverty line was pegged to the pan-European median income, instead of national medians. From a European perspective, this is clearly a RP line, because it always grows at exactly the same rate as the European median income. However, from the perspective of a small member country which has no discernible influence on the European average, this RP measure becomes effectively an absolute one. It is absolute; not in the sense that it is fixed, but in the sense that it does not respond to changes in domestic median income, or indeed any domestic variable.

SP and MD can be classified according to the same logic. SP becomes in effect relative in nature if public perceptions of what constitutes poverty are closely related to average incomes, and move in line with them. If these perceptions are rather independent of average incomes, SP becomes a more absolute measure. With MD, it depends on how the list of items is assembled and updated. If it is updated very frequently and in line with average consumption habits, it becomes more relative in nature. If it is only changed very infrequently and/or if changes do not bear a close relationship with average consumption habits, it becomes more absolute.

Table 1.3: How different poverty measures can tend towards (→) being 'more relative' or 'more absolute'

	Relative poverty	**Absolute poverty**
Relative poverty	n/a	RP → AP if updated only infrequently; RP → AP if national poverty is measured against an international median, on which the country in question has little impact
Absolute poverty	AP → RP if upgraded very frequently	n/a
Subjective poverty	SP → RP if public perceptions of what constitutes a 'necessary minimum' is closely related to average incomes	SP → AP if public perceptions of what constitutes a 'necessary minimum' is either static, or changes in ways unrelated to average incomes
Material deprivation	MD → RP if underlying consumption basket closely follows average consumption patterns	MD → RP if underlying consumption basket does not follows average consumption patterns

Some of the above measures can also be blended, an example being the combined MD/RP measure which forms the basis of the third official child poverty target in the UK. It counts those who are simultaneously in two kinds of 'poverties': Households must have a deprivation score of at least 25, and their income must fall below 70% of the median. Ravallion and Chen (2009) have constructed a RP measure with an absolute floor below which the poverty line cannot fall. Since the poverty line becomes decoupled from the median below this threshold, the measure is effectively a combination of RP and AP.

Having defined and classified the most important contemporary poverty measures, it is now possible to move on to an overview of the empirical literature using two or more of these measures. The key result of this literature review can already be forestalled: The choice of a poverty measure is not simply a technical detail; it is the decisive choice which shapes a study's outcome.

1.4 How different poverty measures produce different results

Using British data from 1999, Bradshaw and Finch (2003) apply three different poverty measures: RP, MD and self-assessed SP. This method produces three different poverty populations, and the extent to which they overlap can be used as a measure of the extent to which the three indicators are interchangeable for one another. Given that the three indicators measure different things, it would be surprising if the overlap of the poverty

populations was very strong. For example, an individual whose income had recently dropped to a very low level would instantaneously be classified as poor by the RP, but probably not yet by the MD measure. However, the most notable outcome of this study is not that the overlap limited, but that there is virtually no overlap at all, beyond what a random draw would produce.[6] The authors note:

"These results indicate a considerable lack of overlap between measures that have been, and still are, used to represent poverty. If the measures were completely uncorrelated one would expect to obtain a distribution that is quite close to the one obtained" (ibid p. 516).

Crucially, each indicator identifies different risk groups. The RP measure suggests that pensioners and single households are disproportionally affected by poverty, while couples with children are less poverty-prone. The MD index, in contrast, identifies pensioners as a low-risk group, while couples with many children now appear disproportionally vulnerable. A few findings are consistent across all three indicators; in particular, all three identify economic inactivity as a risk factor. But even here, large differences in magnitude exist (ibid. p. 520). The three indicators thus lead to differing, and potentially conflicting policy recommendations, for example with regard to how to allocate social policy budgets.

Brewer et al (2008, pp. 70-79), using British data from 2006-07, measure poverty among families with children in two different ways – RP and MD – and compare the results. The poverty count is roughly similar across both indicators, but only about half of those in relative income poverty are also materially deprived, and vice versa. RP and MD are not completely uncorrelated, but

"the relationship is far from perfect, with considerable volatility in the pattern of Material deprivation scores across income. Moreover, there is a wide variation in Material deprivation scores for given incomes."

The authors compose a structural model to estimate which factors increase the risk of RP and MD, controlled for other factors. For a few of these factors, both RP and MD yield similar coefficients, in particular, both identify lack of employment as a significant risk factor. But the coefficients of other potential risk factors differ across indicators. Geography

[6] Their poverty populations for all three measures are in the order of 20% of the total population, large enough to make some overlap almost inevitable. Even if these three populations were selected by random drawings, some individuals would be selected more than once.

stands out as a sharp separator of RP and MD: The two indicators do not identify the same 'poverty pockets'. This divergence is not especially problematic as long as the reason is rather obvious. Households living in London, for example, are less likely to be in RP than households with similar characteristics living elsewhere, while more likely to find themselves in MD poverty; but this is almost certainly a reflection of regional price differences. However, there are other differences in risk factors which have no obvious explanation, such as the role of household type or ethnicity.

Cribb et al (2012) perform a similar comparison, using a different specification of MD, and more recent data which capture the impact of the current recession. On their account, the overlap between the two poverty populations is even smaller. 44% of the materially deprived children live in households with incomes above 70% of the median.[7]

Van den Bosch et al (1993) compare poverty rates in seven European regions and small countries, applying RP and SP measures to data from the mid-to-late 1980s. This time, the SP measure is a majoritarian one based on survey responses. By definition, this specification produces a larger overlap of the groups than the previous studies, because one poverty population is now always a subset of the other. If the SP (RP) threshold is above the RP (SP) threshold, then all the relatively (subjectively) poor are automatically in subjective (relative) poverty. But in this study, it is the size of each region's poverty population that differs dramatically depending on which poverty measure is used. The two measures provide different impressions about where Europe's poverty pockets are. SP in Belgium, for example, is more than twice as high as in the Netherlands, even though RP rates are similar. Curiously, even though one poverty population is always a subset of the other in each region, there are still differences in the risk factors identified. This can occur when one population subgroup is overrepresented among those who are in between the two poverty lines, and therefore poor according to one indicator but not according to the other. Within each region, there are groups which have a high poverty risk by any indicator, especially the economically inactive. But in many regions, whether pensioners, lone parents, single adults or large families are classified as high-risk or low-risk groups depends on the choice of indicator (ibid, pp. 248-253).

In a similar analysis, Marks (2007) applies three different poverty indicators to Australian data from 2001 and 2002. Apart from RP and self-assessed SP, he uses a measure of

[7]These children do not appear in the statistics for the combined MD/RP measure, since households with incomes above 70% of the median are removed.

'financial stress', which could be regarded as a partial MD indicator. Respondents are asked how frequently they incur arrears on important bills or have to borrow money to meet necessary expenses. The RP and the financial stress indicator display similar poverty rates, but again, the relatively poor and the financially stressed are distinct groups, with only about a third of the relatively poor also reporting to experience financial stress. The overlap between SP and financial stress is relatively large, but only 30-40% of those who view themselves as poor also record incomes below the RP line. At the same time, some of those households who classify their own living standards as 'prosperous' find themselves in RP.

Unsurprisingly, the indicators differ in the risk factors they identify. Controlled for other factors, higher education levels are significantly associated with a lower risk of RP, but not with a lower risk of SP or financial stress. Controlled for other factors, the risk of financial stress significantly decreases with age, which is not true for the risk of SP and RP.

Einasto (2002) performs a comparison of three different poverty measures – RP, self-assessed SP, and MD – for a single country over time. He applies the three measures to data from Estonia between 1994 and 1999. Only 45% of those in RP are also in MD poverty, while 39% of the materially deprived are also relatively poor. SP shows no strong overlap with either measure, and all three show different time trends.

Using data from 23 European countries as of 2003, Matcovic et al (2007) compare RP and self-assessed SP rates. The most apparent, albeit predictable difference is observed when separating the old (EU-15) from the new member states (NMS), and calculating (unweighted) average rates from the national RP and SP rates. Both regions display the same average rate of RP, but an enormous gap in SP rates. SP exceeds RP in every single one of the NMS, while the opposite is true in each of the EU-15 states except Greece. Matcovic et al also look at an index of MD, and find a moderate correlation ($r = 0.52$) between MD scores and RP rates.

Boarini and d'Ercole (2006) review previous studies on the overlap of RP and MD measures, and conclude that the mismatch between the poverty populations identified by the two indicators is a consistent finding across the literature. The exact figures differ, but generally, fewer than half (and often substantially fewer) of those classified as 'poor' by the RP indicator are also classified as poor by the MD indicator and vice versa. The authors' aggregate a study of their own to the literature, which confirms these findings. They find that the overlap increases when the RP poverty threshold is raised, e.g. to 70% of the

median. But then again, raising one poverty line also increases the size of one of the poverty populations, which would increase the overlap even if the groups were assembled by chance.

The main findings of Boarini and d'Ercole are confirmed by a more recent cross-country study by the OECD (2008, pp. 190-193), which applies an indicator of MD and one of RP to its member states. This study also finds:

"The overlap is in general only partial, i.e. only a small proportion of people reporting Material deprivation are also income poor, and vice versa."

As a cross-country average, only a fifth of those who count as materially deprived are also in RP, and there is no country where the overlap is larger than one third. This study also performs an indirect risk group analysis by plotting RP rates and MD rates against age. Two very different lifecycle profiles emerge. The RP risk shows a roughly U-shaped pattern: It is high among recent entrants to the labour force, falls steadily over people's working life, and rises again as they approach the retirement age and beyond. The MD risk, in contrast, is highest in the early stages of working life and falls in an almost linear fashion from then on in most countries covered, though the steepness of the fall differs (ibid. p. 189).This echoes an already mentioned finding from earlier studies, which perform a more direct risk-group analysis: Pensioners are a high-risk group according to RP, and a low-risk group according to MD measures.

MD results depend on the contents of the underlying consumption basket and on the implicit poverty line, but the above findings do not seem to be sensitive to changes in these variables. The MD measure used by Eurostat (2009) differs from the OECD specification which most studies use, but reproduces the same basic results. Experimenting with various implicit poverty lines for MD, and comparing MD rates to RP and SP rates across the EU member states, Eurostat concludes:

"*All these figures confirm that deprivation and poverty are not concentrated on the same subpopulations and that the relationship between income poverty and deprivation is weaker than could be expected*" (ibid pp. 9-12).

In the same study, self-assessed SP is not particularly strongly correlated with either RP or MD.

A different Eurostat (2009a) study which compares RP and MD across the EU-27 also finds:

"In general, the correlation between the standard At-risk-of-poverty rate and the Material deprivation rate is quite low (0.42 at country level), given essentially that in most countries different subsets of the population are affected by each of them" (ibid p. 10).

Using data for British families with children from the early 2000s, Brewer et al (2009) plot a wide variety of MD and quasi-MD measures against the distribution of income. This allows a much greater sensitivity analysis as to whether the above findings are an artefact of a particular cut-off point for either RP or MD poverty, or a particular specification of MD. The authors show that the correlation between MD and income is weak in general, not just below the RP line. Average MD scores fall with income, but only in a slow and erratic way. Albeit at a lower frequency, households with high MD scores can still be found even in the high income brackets. It is only the most restrictive specifications of MD which are largely confined to the lower half of the income distribution, and even these go well beyond a cut-off point of 60% of the median, meaning that the overlap between the RP-population and the MD-population is still limited.

Measures of income-based AP are rarely contrasted to MD or SP measures. An exception is the study by Eberstadt (2008), which compares AP and (partial) MD using US data for the past four decades. The main outcome is that while AP has shown no systematic trend since the early 1970s, the more direct measures show sustained improvements in living standards at the lower end of the distribution. The results need to be interpreted with some caution. The author discusses potential explanations, and most of them seem to be specific to US data rather than to the relationship between AP and MD in general. Still, what is safe to say is that the study provides no reason for interpreting AP and MP as close substitutes.

Thus far, every study has shown a very limited overlap between RP, MD and/or SP. This lack of association between poverty indicators also extends to a comparison of RP and AP, albeit in a different way. Unlike with SP and MD, RP and AP cannot identify entirely different subpopulations, because both are income-based measures, which differ only in where and how they set the poverty threshold. Thus, if the RP (AP) line is above the AP (RP) line, the AP (RP) population is always a subset of the RP (AP) population. They could only identify

different risk factors if one population group was strongly over- or underrepresented in the income range between the two thresholds. Studies which apply RP and AP measures to a single country and look for differences in the risk group analyses are therefore rare.

Studies which use both RP and AP measures are almost always cross-country comparisons, or within-country comparisons over time, with AP and RP rates being plotted against one another. So unlike in the studies reviewed up until here, the focus of RP-AP studies is on poverty levels and time trends, not on the identification of risk groups, risk factors or geographic poverty pockets. Their focus is not on the micro level but the macro level, which will be the topic of Chapter 4. For this chapter, suffice it to show that what is true for the micro level is also true for the macro level: Different poverty measures produce different results.

Blackburn (1998, p. 460) applies RP and AP measures to eleven Western European and North American countries, using data from the early 1980s and the mid-1980s. Their AP line is the official US poverty line of the year 1985, which is transferred to other countries and years while keeping purchasing power constant. Plotting the poverty rates against one another, a negative correlation of r = –0.36 results. This is because at that time, many European countries displayed AP rates that exceeded their RP rates, while the US deviated far into the other direction. The author notes that *"poverty comparisons can be very sensitive to whether a relative or absolute standard is used"* (ibid. p. 450).

A similar comparison has been performed by Scruggs and Allan (2006), using data from 16 OECD-countries in the mid-to-late 1980s and the mid-to-late 1990s. Their AP threshold is set at 40% of the US median in 1986. A strong negative correlation between AP and RP rates results. Times trends differ even more, as the two countries which have recorded the greatest increase in RP (Ireland and the Netherlands) are also the ones which recorded the largest decrease in AP.

Notten and de Neubourg (2007) compare RP and AP rates for 16 Western European and North American countries in both 1996 and 2000. Their AP line is the PPP-adjusted US poverty line, as in Blackburn's study. Contrary to the latter, both measures are correlated in the snapshot perspective. Yet time trends differ strongly. Ireland and Spain have recorded the sample's sharpest reductions in AP, but none in RP.

A similar result is obtained by Smeeding (2006), who compares RP and AP in 11 Western European and North American countries, using, again, the PPP-converted US poverty line

for AP. In the snapshot perspective limited to the year 2000, AP and RP rates are correlated, but the time trends from the mid-1980s to the year 2000 clearly differ. Again, the countries that have achieved the largest percentage point reduction in AP are also the ones which recorded the largest percentage point increase in RP.

Albeit indirectly, Kenworthy et al (2008) study the same relationship, using data from 17 OECD countries in 2000. The authors do not apply poverty lines, but look at relative and absolute living standards of people at the lower end of the income distribution, which are very close substitutes for RP and AP respectively. Relative living standards are approximated by the ratio of incomes at the 10^{th} percentile to incomes at the 50^{th} percentile of the distribution. Absolute living standards are approximated by incomes at the 10^{th} income percentile in each country, measured in PPP-adjusted US Dollar. The authors obtain a correlation of r = 0.62 for this cross-country sample. But as shown above, correlations at a single point in time may hide huge variation in time trends, which are not considered in this study.

The OECD (2008) provides a rather unusual version of a cross-country AP comparison, where each country's relative poverty line is frozen around the year 1995, and then applied to income data of 2005. Each country thus retains a poverty line of its own, and progress within each country is measured against domestic real median incomes of a decade earlier. The results obtained for the change in AP, under this definition, also have little in common with the data for the change in RP during the same period. Finland and Australia, for example, record noticeable increases in RP, while AP falls by about one half.

The paragraphs above are a review of existing studies which compare RP and AP rates. The remainder of this subchapter will make a minor addition to this literature by providing a time-series comparison of RP and AP rates in the UK. It is derived from a dataset from the Institute for Fiscal Studies (2008), which permits a rough reconstruction of the income distribution in different years from 1961 to 2008. The advantage of this dataset is that it enables some experimentation with different specifications of both RP and AP, thus allowing a broader sensitivity analysis. Apart from data for the population as a whole, the IFS dataset also contains data for various population subgroups separately: children, pensioners, working-age parents and working-age non-parents. This allows checking whether the correlation between RP and AP is robust across various specifications, time periods and subgroups. The IFS dataset forms the basis of the institute's publication series 'Poverty and inequality in the UK', which also contains discussions of RP and AP. But unlike

the correlation matrix compiled below, the IFS series only looks at the evolution of these rates during short and recent periods, and it does not directly plot RP and AP against each other. A downside of the dataset is that it does not allow much experimentation with AP rates. The only AP-rates which can be extracted from it are quasi-AP rates against the real median incomes of the years 1996 and 1998. It would be preferable if the quasi-AP line could be obtained as against the median of any given year.

When taking the period 1961-2008 as a whole, the correlation between RP and AP is always negative – in all subgroups, with all combinations of thresholds and measures of central tendency. This is, of course, not surprising in a growing economy, where AP always falls in the long run while RP can go in any direction. But the dataset can also be divided into shorter periods, e.g. decades, which produces a very different set of outcomes. The correlation between AP and RP rates can now be strongly positive, strongly negative, non-existent, or anything in between.

The tables below illustrate this by contrasting the correlations obtained for two different decades, the 1980s and the 2000s, using the median-based measures and taking a AP line based on the real median of 1998. For the 1980s, RP and AP are consistently and strongly negatively correlated.

Table 1.4: Cross-correlation matrix of relative vs. quasi-absolute poverty rates in the UK 1980-1989

	RP (70% of median)	RP (60% of median)	RP (50% of median)	RP (40% of median)
AP (70% of 1998-median)	-0.97	-0.96	-0.93	-0.90
AP (60% of 1998-median)	-0.96	-0.95	-0.92	-0.88
AP (50% of 1998-median)	-0.93	-0.86	-0.82	-0.80
AP (40% of 1998-median)	-0.67	-0.49	-0.41	-0.44

-author's calculation, data from IFS (2008)

For the 2000s, in contrast, the association between RP and AP is generally positive. This association is much less consistent across different threshold combinations, but taken together, the two tables still serve to show that the association between AP and RP can go either way. The impression about which periods are associated with progress in poverty reduction, and which are associated with stagnation or a worsening, often depends on which of the two poverty measures is chosen.

Table 1.5: Cross-correlation matrix of relative vs. quasi-absolute poverty rates in the UK 2000-2008

	RP (70% of median)	RP (60% of median)	RP (50% of median)	RP (40% of median)
AP (70% of 1998-median)	+0.87	+0.55	+0.10	-0.48
AP (60% of 1998-median)	+0.84	+0.59	+0.23	-0.33
AP (50% of 1998-median)	+0.64	+0.64	+0.49	+0.07
AP (40% of 1998-median)	+0.13	+0.50	+0.72	+0.62

-author's calculation, data from IFS (2008)

These time series do not yet cover the present recession, which has only had a substantial impact on real incomes since 2010. But preliminary data suggest that the same pattern, or rather, the lack of a consistent pattern, will probably hold throughout the recession and beyond. The study by Brewer et al (2011) is in part an assessment the changes in RP and AP since 2008, and in part a forecast of the likely changes over the coming years. The quasi-absolute threshold is set at 60% of real median incomes in 2010. Between 2009 and 2012, the AP measure shows a sharp increase in poverty across all population groups studied. RP, in contrast, initially decreased slightly, and then returned to its 2009-level. From 2013 onwards, RP is forecast to continue increasing, while AP is forecast to slowly fall again.

1.5 Conclusion

Given that poverty is a highly abstract concept, it is obvious that different indicators are not simply substitutes for one another. But the short summary of this chapter is that the results of a poverty study are not just influenced, but virtually determined by the choice of the poverty measure.

Nevertheless, policymakers, charities and anti-poverty campaign groups often seem to assume that different poverty indices were close substitutes. The choice of a poverty indicator is therefore mistakenly treated as if it were merely a technical detail, rather than the decisive question. As a result, the figures resulting from the application of common poverty concepts are seldom interpreted with the appropriate caution. For example, the poverty count resulting from the use of RP measures are frequently reported as 'the number of people below the poverty line' or simply 'the number of people living in poverty' (see, for example, Gregg et al/ Joseph Rowntree Foundation, 1999; CPAG, 2000; Save the Children, 2000; Barnado's, 2001). The caveat that such figures result from the application of

one very specific concept of poverty, based on very specific assumptions, is seldom provided (even though there are a few exceptions – see UNICEF, 2012). Section 2.4 of the next chapter will show that this leads to a variety of widespread misunderstandings in the poverty debate.

This chapter has explained how different poverty indicators are constructed and applied, without much regard for the ideas that these indicators represent. But different indicators do not just differ in their technical properties. They embody different ideas of what poverty actually is. The next chapter will address this issue. It will explore how the common understanding of poverty has itself changed over time in the developed world, and especially in the UK.

2. The understanding of poverty over time

2.1 The origins of poverty measurement

Poverty research has long been based on an understanding of poverty as impeded physical functioning. Poverty was interpreted as a lack of resources necessary to fulfil essential physical needs such as nutrition, shelter and clothing. In Britain, systematic attempts to measure poverty go back to the research of Charles Booth and Seebohm Rowntree in the late 19th century (Pantazis et al, 2006, pp. 91-92; Hills, 2004, p. 39; Townsend, 1954). Data documenting the living standards of the poorest had been gathered long before (Gordon, 2006, pp. 37-39), but it was the work of Booth which became associated with the first use of explicit, monetary poverty lines. This advent of monetary thresholds separating the poor from the non-poor marks the advent of modern poverty measurement, which differed from the concept of 'pauperism' that was known until then: A 'pauper' was not defined in terms of income, but in terms of reliance on poor relief.

The poverty line enabled Booth to compose his renowned poverty maps of London, which categorised boroughs by their prevalence of poverty (Charles Booth Online Archive, n.d.; Glennerster, 2004, pp. 18-21; Fearon, n.d.). Booth, however, never explained where this threshold – which he called 'the line of poverty' – came from. This has only been 'second-guessed' later: Gillie (1996) finds evidence suggesting that Booth had derived it from the calculations of the London School Board, which had devised a formula for working out which families should be exempt from school fees.

Seebohm Rowntree's work is different insofar as he explained in great detail how he developed his poverty line – indeed, that is the major part of his first study 'Poverty, a study of town life' (see Rowntree, 1902; Rowntree, 1922). This study, which measured poverty in York in 1899, can therefore also be seen as the first systematic development of a poverty indicator. Rowntree defined poverty in the following way:

"By this is meant that their [the family's] total earnings are insufficient to supply adequate food, clothing and shelter for the maintenance of merely physical health" (Rowntree, 1922, p. 54).

In this study, establishing what counts as 'adequate' is seen as a matter of scientific enquiry, not personal judgment. The role of the poverty researcher, in this framework, is to

consult the relevant scientific literature, and identify a common denominator on what that necessary minimum is. Once this denominator has been established, it has to be converted into a set of actual goods and services. The researcher then has to establish how much it would cost to purchase these goods and services at a low cost, given local prices. The result is a costed consumption basket containing a specific quantity and quality of food, housing, clothing, and several household-related items. As far as possible, every subcomponent of this basket is meant to reflect a scientific consensus in the respective discipline about what constitutes minimum requirements for physical health. The total cost of acquiring all elements in the basket is the poverty line.
It is worth looking in greater detail at how Rowntree compiled the three most important sub-baskets, namely the ones for food, housing and clothing, because it clarifies the understanding of poverty behind this method.

The chapter on food represents the purest expression of Rowntree's approach. It begins with a literature review summarising the state of knowledge in the field of nutrition science, from which Rowntree extracts a list of the essential nutrients that make up a minimum healthy diet (Rowntree, 1902, pp. 88-98). The list is then transformed into a food basket gathering all these nutrients at a low cost: *"Our next step is to select a standard diet which shall contain the nutrients that are necessary for the maintenance of physical efficiency. [...] It now only remains to ascertain the cost of the diet which has been selected* (ibid., p. 98-103). The result is the basket's food component. Not every component of the basket is derived in this way, but this is Rowntree's 'gold standard', and where he deviates from it, he describes it as a second-best solution.

The chapter on housing makes this clear. It also begins with a review of the relevant sections of the literature on hygiene, in order to establish a minimum amount of living space required in order to avoid adverse health effects (Rowntree, 1902, pp. 171-180). Rowntree explains that ideally, the way to proceed from here would be to collect the corresponding local rents for this minimum quantity of housing space, and use it as the basket's rent component. He did not put this into practice, because he did not consider York's rental market to be sufficiently developed: There were simply not enough flats on offer which fulfilled Rowntree's requirements; so instead, he recorded the rents that the survey participants actually paid (Rowntree, 1902, p. 106). Since the investigation was confined to poor areas, he assumed that these already represented the necessary

minimum. But this is a compromise owed to local idiosyncrasies. Rowntree still explains what his first-best solution would have been, even though he could not implement it.

The clothing category also represents a compromise of this sort. Since the literature did not allow the identification of clothing basket, Rowntree established one interviews with survey participants. But again, this is a second-best alternative. The core idea is still that *"clothing should be adequate to keep the man in health"* (Rowntree, 1902, p. 107-108. The need for household goods was established in a similar way.

On the whole, Rowntree's 1899 measure was an extremely ascetic, pure subsistence standard:

"A family living upon the scale allowed for in this estimate must never spend a penny on railway fare or omnibus … They must never purchase a halfpenny newspaper or spend a penny to buy a ticket for a popular concert. They must write no letters to absent children … They cannot save, nor can they join a sick club or Trade Union … The children must have no pocket money for dolls, marbles, or sweets. The father must smoke no tobacco, and must drink no beer. The mother must never buy any pretty clothes for herself or for her children … Should a child fall ill, it must be attended by the parish doctor; should it die, it must be buried by the parish" (Rowntree, 1922, p. 134).

People were classified as poor – more precisely, to be in 'primary poverty' – when they were unable to afford this basket of minimum necessaries. The central finding of the 1899 study was that as many as one in ten households lived in conditions of primary poverty, with incomes below this poverty line, ascetic though it was. Rowntree's findings made a major impression on policymakers and the wider public. It is documented that Winston Churchill, then an MP, commented at the time:

"I have been reading a book which has fairly made my hair stand on end, written by a Mr Rowntree who deals with poverty in the town of York" (quoted in Bradshaw, 2000, p. xliii).

Churchill interpreted the findings as an indictment of the British government's spending priorities:

"It is quite evident from the figures which he adduces that the American labourer is a stronger, larger, healthier, better fed, and consequently more efficient animal than a large

proportion of our population, and this is surely a fact which our unbridled Imperialists, who have no thought but to pile up armaments, taxation and territory, should not lose sight of. For my own part, I see little glory in an Empire which can rule the waves and is unable to flush its sewers"(quoted by Rowntree Society, 2012).

Lloyd George also reportedly endorsed the book during public speeches, and it probably contributed to the social reform programme adopted from 1906 on (Bradshaw, 2000, p. xliv).

But Rowntree's contribution went beyond its immediate impact. It inspired a whole new branch of social research. In the first half of the 20th century, and especially in the interwar period, a variety of similar, regional poverty studies were carried out. Rowntree's methodology of deriving the poverty line from a basket of necessities, the 'Budget Standard Approach' (BSA), was widely replicated (Horton & Gregory, 2009, pp. 1-6; Linsley & Linsley, 1993; Pichaud & Webb, 2004, pp. 33-47). The understanding of poverty underlying the BSA can therefore be considered the dominant understanding of poverty at that time.

The common thread which runs through all BSA studies is that poverty is a physical condition and an 'objective' phenomenon.[8] In this understanding, defining what does and what does not constitute a necessity is not merely in the eye of the beholder; it is, on the contrary, largely physically and biologically determined. BSA researchers always concede that there is a degree of personal judgement and discretion involved, but this is typically presented as an accidental, unintended feature of their studies. Personal judgement comes in when the researcher has to choose a second-best solution due to issues of data availability, gaps in the scientific literature etc. Thus, BSA researchers do not claim that

[8] Whether or not this minimalistic, subsistence-related concept really represents Rowntree's own understanding of poverty is a matter of controversy. Veit-Wilson (1986) argues that even though most authors have interpreted Rowntree in this way, it is a misreading of his position. According to Veit-Wilson, Rowntree's understanding of poverty was, on the whole, much broader, with the subsistence poverty concept underlying his famous poverty basket representing just one layer of it. Therefore, Veit-Wilson argues that the later reinterpretation of poverty as inhibited social participation rather than physical deprivation should not be seen as a paradigm shift away from Rowntree, because it was not at all at odds with Rowntree's broader understanding of poverty.
This debate is, however, tangential to the purposes of this chapter. Rowntree's above-described necessities basket was based on an understanding of poverty as physical deprivation, not inhibited social participation – regardless of whether this fully describes the way Rowntree understood the concept or not. It may well have been just one facet of his thinking, but it is this facet which formed the basis of his most widely publicised empirical results, and more importantly, which shaped poverty research in the first half of the 20th century. His poverty theory may well have had many other elements, but these are not the elements which are reflected in his 1899 measurement, nor which other poverty researchers following Rowntree's methodology adopted.

their studies were entirely objective, but they see entirely objective poverty studies as feasible in theory.

It follows that in this understanding, the definition of poverty is also a universal one; it is not seen as specific to time and place. This may seem counterintuitive because many BSA poverty surveys contain a wealth of highly site-specific local information – indeed vastly more so than contemporary relative poverty studies. Rowntree's 1899 survey, apart from providing a general overview of the local economy and demographics of York, goes into a level of detail which has no equivalent in modern poverty research. He describes York's sewer system, provides ground plans of typical houses in the investigated areas, shows what building materials they are made of, and explains the conditions of meat and dairy production (because this affects hygiene standards), among many other details. While not all BSA researchers have matched Rowntree's meticulousness, BSA studies contain, by their nature of being local surveys, much more site-specific information than contemporary poverty studies.

Still, most of this site-specific information enters the analysis with a specific function, namely to show how it affects the requirements for physical efficiency. Therefore, features like climatic conditions, architectural features or working conditions are sometimes described in great detail, because they influence the composition of the BSA. In areas where more people are engaged in physical labour, a BSA requires a higher nutrient intake, and in areas with colder temperatures, more heating fuels are required to maintain a given room temperature. But what these studies pay scant attention to is customary tastes and social conventions. BSA-poverty is not rooted in a social context. It is impeded physical functioning, so it differs across time and place only insofar as the conditions for physical functioning differ.

While the achievements of BSA poverty studies are undisputed, important questions remained unanswered in this framework. A puzzling feature of Rowntree's work was the high degree of what he labelled 'secondary poverty', a phenomenon which also affected other BSA poverty studies, even if they did not necessarily use this term. The figures which attracted most attention were those for primary poverty, which described the condition of those whose income was below the BSA poverty line. However, Rowntree and his research team also found conditions of visible deprivation among households who would not have been classified as poor by the BSA method alone. There was something that their measure appeared to miss. As Rowntree explained:

"The investigator, in the course of his house-to-house visitation, noted down the households where there were evidences of poverty, i.e. obvious want and squalor. Direct information was often obtained from neighbours, or from a member of the household concerned, to the effect that the father or mother was a heavy drinker; in other cases the pinched faces of the ragged children told their own tale of poverty and privation" (Rowntree, 1902, pp. 115-116).

He labelled this phenomenon 'secondary poverty'. It defined the situation of households whose income was above the BSA poverty line, meaning that they could, in theory, have bought the full basket or a close equivalent, but who nevertheless visibly ended up in poverty. To quote Rowntree's own definition: *"Families whose total earnings would be sufficient for the maintenance of merely physical efficiency were it not that some portion of it is absorbed by other expenditure, either useful or wasteful"* (Rowntree, 1902, p. 296).

In other words: During their field studies, Rowntree and his researchers saw that there was much more poverty than their BSA measure indicated. They saw families whose destitution was obvious to them, but which their BSA measure could not detect. It was not clear what explained this mismatch. Rowntree turned to explanations like spending inefficiency, or in his words, *"[i]gnorant extravagance, gambling, or expenditure upon drink"* (Rowntree, 1922, p. 29-30).

He blamed the monotonous working and living conditions the respondents found themselves in, as well as the lack of educational opportunities, but these factors could only go so far in explaining the mismatch. Given the highly restrictive nature of Rowntree's list, some degree of spending inefficiency would not have been surprising; and can indeed be seen as almost inevitable. But 'secondary poverty' was far from being a minority phenomenon. Rowntree found a total poverty rate of 27.8%, out of which only 9.9% was the primary poverty that the BSA could capture (Rowntree, 1902, p. 297-298). It remains an implausible outcome that two thirds of those living in poverty should deliberately and continuously deprive themselves of the necessities required for physical functioning. The BSA methodology could not explain this phenomenon.

2.2 Limitations of Rowntree's poverty framework

Decades later, in the 1950s, Peter Townsend offered an alternative explanation for this apparent paradox. He questioned the relevance of the Booth/Rowntree-type BSA for being too detached from people's actual consumption patterns:

"How those on the borderline of poverty ought to spend their money is a very different thing from how they do spend their money. It would be unrealistic to expect them, as in effect many social investigators have expected them, to be skilled dieticians with marked tendencies towards Puritanism" (Townsend, 1954, p. 133).

And:

"It was not appreciated that many in this class would have needed virtues of self-denial, skill and knowledge not possessed by any other class in society, if they were to spend their money as it was thought they should spend it" (ibid.).

Townsend's criticism was not just that the Booth/Rowntree poverty standards were overly restrictive. If that had been the only problem, it could arguably have been resolved by including additional components, and/or allowing for a higher margin of spending inefficiency. Townsend found that BSAs contained a more systematic error. He observed that even when poor people experienced a severe lack of resources, they never devoted all of their spending to physical needs, but always reserved a share for activities related to social life and compliance with social conventions. By focussing merely on physical needs and ignoring social ones, BSA-measures ignored the fact that people do not live in a vacuum, but in a social context, and that this necessarily affected their spending behaviour. Participating in wider society, people could not dispose of their resources with the same autonomy as a 'Robinson Crusoe' on a lonely island, because this participation came at a cost:

"The pattern of spending among poor people is largely determined by the accepted modes of behaviour in the communities in which they live" (ibid., p. 134).

This refers to expenses which could be labelled 'social participation costs' or 'social inclusion costs', and which can include a particular standard of clothing or the attendance of social events. Inability to meet these expenses does not meet the BSA's 'physical efficiency' criteria, but it does limit an individual's ability to participate in society.

This change in perspective gave rise to what would later be labelled the 'rediscovery of poverty' of the 1960s (Glennerster, 2004, pp. 85-90; Pichaud and Webb, 2004, pp. 45-47). It led to the abandonment of BSA poverty measures, and eventually, to their replacement by relative measures. The poverty literature generally treats this change in measurement as an automatic consequence of the change in the underlying understanding of poverty (ibid.). This thesis will later challenge this interpretation (subchapter 5.2), but for now, it is sensible to go along with it, and show why the 'rediscovery of poverty' led to an outright break with the BSA paradigm rather than an evolutionary change within it. The change in poverty measurement would have far-reaching ramifications later on, so it is worth devoting some attention to its causes.

Is the BSA concept inherently irreconcilable with an understanding of poverty as impeded social participation? Up until here, it could still be argued that Townsend's criticism could have been accommodated *within* the BSA framework, instead of requiring a fundamentally new definition of poverty. In devising the list of essentials, the definition of 'needs' could have been extended to include not only physical efficiency, but also social participation. This would have required two major changes:

1. Social and/or cultural activities could have been included as a category in its own right, for example in the form of a basket component called 'social participation/inclusion'.

2. The aspect of compliance with social norms could have shaped the selection of items for the other categories. In selecting items for the BSA basket, researchers would not only have to ask whether an item contributes to physical functioning, but also whether it is in line with prevailing social customs. In the clothing category, for example, this would have meant that a garment would not just have to protect from the weathers. It would also have to be suitable for appearance in public, given time-specific and place-specific conventions.

The question why poverty research has not taken this direction in the 1950s and 1960s is not directly addressed in the literature. But it is noteworthy that insofar as there have been attempts to integrate the two concepts – physical functioning and social participation – they simply did not mix well. It cannot be proven, but it is a possible reason that the approach was not taken further because the limited attempts that had been made had not led very far. It was Rowntree himself who, unusual among those who used the BSA

methodology, had already moved several steps into this direction over time, and found the possibilities limited. The evolution of Rowntree's methodology over time can be shown by comparing the three different BSA-baskets underlying his three studies

Rowntree's 1899 pioneer basket was one of the purest examples of a measure which defined poverty in terms of physical efficiency. Yet even in this study, minimalistic though it was, one can already find very minor elements that paid heed to customs and social conventions. Rowntree states his criteria for the selection of items in the clothing category in the following way: "*The clothing should be adequate to keep the man in health,* ***and should not be so shabby as to injure his chances of obtaining respectable employment****"* (Rowntree, 1902, p. 108; emphasis added). Since perceptions of 'shabbiness' are necessarily specific to time and place, this was a departure from the BSA's leitmotiv of poverty as a universal, objective phenomenon. But it was not a radical a departure: Respectable appearance was not treated as a necessity in its own right, but as a means to generate earnings, and thus ultimately, again, to maintain physical efficiency.

Yet Rowntree's approach to poverty measurement kept evolving, as his 1918 book 'The human needs of labour' shows. This book was not intended to be a poverty study, but it would eventually become the basis for the second poverty survey of York, in 1936. The 1918 budget was no longer limited to physical subsistence, but saw some steps towards aggregating social participation components. On the one hand, this can be seen in the complete reworking of the 'personal sundries' component, which was augmented by several items not related to physical efficiency. In sharp contrast to its 1899 counterpart, it now made allowance *"for newspapers, for incidental travelling, for recreation, for occasional presents to the children, for beer and tobacco, subscriptions to church or chapel, burial and sick clubs for wife and children, and the multitude of small sundries such as stamps, writing materials, hair-cutting, drugs, etc."*(Rowntree, 1918, p. 104). In the 1899 measure, many of these items were not just absent, but explicitly ruled out.

Social participation considerations also entered the selection of items in other categories. Some of the changes are rather subtle, recognisable only in the choice of vocabulary. A good example is the food chapter, where Rowntree explains: *"[T]he choice of the dietary should be guided by considerations of the greatest possible economy commensurate* ***with due regard to national customs****"* (Rowntree, 1918, p. 89). This is a consideration which was not present in the 1899 study. The remainder of the chapter magnifies the contrast: *"In this*

country almost every one [sic] *takes a mixed diet – even the poorest try to get a certain amount of meat; and though undoubtedly health can be maintained without it,* ***we cannot, in selecting our dietary, ignore the fact that meat-eating is an almost universal custom. So is the drinking of tea and coffee, and though these do not actually supply any nutriment,*** *a certain amount must be included in the dietary"* (Rowntree, 1918, p. 90, emphasis added). Interestingly, the 1899 study had also included a few meat products, but it had done so for a completely different reason. Then, the case for inclusion was based on the limited biological substitutability between animal protein and vegetable protein, not customary eating habits.

Similar changes can be observed in the clothing chapter, where Rowntree aims "*to arrive at the minimum sum which a working-class family must spend on such clothing as is necessary to keep the body warm and dry,* ***and to maintain a modest respectability****"* (Rowntree, 1918, p. 100; emphasis added).This contrasts with the 1899 survey, where the issue of 'respectability' was only considered relevant insofar as it affected employment prospects. Along the same lines, in the rent chapter (which, this time, uses market rental rates), a dwelling unit with a parlour is now allowed (ibid., p. 97). The concept of secondary poverty is also dropped.

Building on this, the second poverty survey of York went beyond the physical efficiency concept, and showed first steps towards an understanding of poverty based on compliance with social customs (Linsley and Linsley, 1993). The final 1950-study was a continuation of this tendency.

In short, it is not true that the BSA framework cannot go beyond measuring physical deprivation. At least in Rowntree's work, it showed some degree of flexibility and adaptability. But one can identify at least two reasons why Townsend's criticism of the BSA method remained valid even when taking Rowntree's modifications into account.

Firstly, this new dimension of social customs did not integrate well with the existing BSA framework. What defines the original BSA approach is the aspiration to universality and objectivity. Its premise is that 'needs' are a physical/biological phenomenon, and therefore ascertainable with very little individual discretion, through a consultation of the relevant scientific literature. But once social needs are taken into consideration, this whole approach falls apart. There is no scientific consensus on what the minimum requirements for

compliance with social customs are, and unlike in the cases where BSA researchers reverted to a second-best solution, this is not merely a matter of data availability. Social participation per se is a much more abstract concept than physical functioning. Rowntree himself was fully aware of this:

"In the matter of expenditure upon personal sundries I was forced to rely largely upon my own judgment, since it was far less easy to fix a standard in considering such items as recreation and education than in the case of clothing and fuel" (Rowntree, 1918, p. 103)

The problem was, in fact, greater than Rowntree conceded, because it was not limited to the personal sundries component. It also affected the selection of items for every other category. Rowntree pointed out that the results were not really satisfactory, but within the BSA framework, there was little he could do about it.

It may well have been for these limitations that Rowntree did not take the new approach further. On balance, the 1936 and 1950 Rowntree studies were still predominantly about poverty as impeded physical functioning. Poverty as impeded social participation was an add-on (and arguably, it remained an alien element).The label 'personal sundries' can be seen as mistakable, because in large parts, the items in this component also served physical needs. It is not clear, for example, why Rowntree subsumed contributions to 'sick clubs' in this part of the basket. These were a contemporary form of health insurance, which would make them expenses for physical functioning.

In other categories where social customs were considered, this remained within limits. For example, in the clothing chapter, Rowntree stressed that *"there is nothing allowed for mere show"* (Rowntree, 1902, p. 127), and although this seems like a perfectly logical criterion for a poverty standard, there is no obvious dividing line between 'respectability' and 'mere show'.

Secondly, there was also a more fundamental problem. Insofar as Rowntree took social norms into account, he referred to norms of a very static type. The fact that meat was part of a customary diet, or that most homes contained parlours, were not specific to the period of the investigation. Needs of this type may not be as fixed as the purely physical ones, but they still remain constant over long periods of time. Townsend, in contrast, considered needs to be dynamic and constantly evolving. In his interpretation, needs were almost

entirely socially determined, and their evolution was therefore tightly linked to the evolution of overall living standards:

"Poverty is not an absolute state. It is relative deprivation. Society itself is continuously changing and thrusting new obligations on its members. They, in turn, develop new needs. They are rich or poor according to their share of the resources that are available to all" (Townsend, 1962, p. 225).

Similarly, in the USA, Victor Fuchs argued:

"$3,000 in 1933 [...] was not at all the same as $3,000 in 1967. It was a different world, inhabited by people with different habits, different needs, and different life-styles" (Fuchs, 1967, p. 91).

And:

"The median income (in constant dollars) in 1965 was 60 percent higher than in 1947, but there is no evidence that the problem of poverty is regarded as less serious now than twenty years ago. Today's comfort or convenience is yesterday's luxury and tomorrow's necessity. In a dynamic society it could hardly be otherwise" (ibid., p. 93-94).

In short, while the amended Rowntree studies succeeded in integrating a few socially determined needs, they had no mechanism of accounting for the latter's dynamic nature. In the pure BSA framework, people are born with a fixed set of biologically determined needs. In the amended BSA framework of the later Rowntree, people may also develop needs that they would not have developed if they had been born into a society with different customs. But this remains a one-off process (or at best a very infrequent one), and it is largely a random one. The Townsend/Fuchs conception of poverty is even more centred on 'learned' needs, as opposed to inborn ones. But in their concept, this development of new needs is a constantly ongoing process rather than a one-off, and it is systematically linked to common consumption norms rather than a product of chance.

This is a clear break with the understanding of poverty that was encapsulated in the BSA studies.

2.3 The rise of relative poverty

The rethinking of poverty of the 1960s meant a 'dynamisation' of the understanding of needs. The BSA concept of biologically determined and static needs was replaced by one of socially determined and dynamic needs. This change in perspective led to what would later be labelled the 'rediscovery of poverty' of the 1960s (Glennerster, 2004, pp. 85-90; Pichaud and Webb, 2004, pp. 45-47). The change in the *understanding* of poverty eventually translated into a change in the *measurement* of poverty. Subchapter 5.2 will later argue that this process was not as smooth as the poverty literature sometimes implies. But for now, it is sufficient to show that in the UK as well as in other developed nations, BSA baskets disappeared, and poverty lines set as a fixed fraction of central tendency became commonplace. These poverty lines have not remained unchallenged, as subchapter 5.1 will later show, but they became widely accepted.

It began in academia. The previous chapter has provided an overview of the literature using various measures, where it already became clear that while material deprivation, subjective poverty or absolute poverty are still optional complements, the relative measure is always included. Many more poverty studies, some of which will later be presented in subchapter 4.2, use only a relative measure. Already in the early 1980, Sen (1983, p.167) noted an *"emerging unanimity in favour of taking a relative as opposed to an absolutist view of poverty"*. More recently, Scruggs and Allen (2006, pp. 881-883) noticed that "*research has focused almost exclusively on relative poverty rates [...] Virtually all studies of the determinants of national poverty and most comparative descriptions of poverty rates in the LIS*[9] *countries use the concept of relative poverty*".

Relative poverty also became the measure most widely used by national and international governmental institutions. In 1981, the European Commission officially adopted a relative view of poverty, defining the poor as *"individuals or families whose resources are so small as to exclude them from a minimum acceptable way of life in the Member State in which they live*" (European Commission, 1981). Reports measuring poverty on an EU-wide scale followed (see Atkinson, 1998, pp. 2-3).Today the EU, UNICEF, the OECD, the World Bank, and the International Monetary Fund regularly compile internationally harmonised relative

[9] The LIS countries are the countries which participate in the Luxembourg Income Studies, i.e. most of Western Europe, Japan and North America.

poverty indicators (e.g. Eurostat, 2005; UNICEF, 2005; UNICEF, 2007; UNICEF, 2012; OECD, 2008; Ravallion & Chen, 2009; Nielsen, 2009).

Most national governments in the developed world have adopted the measure as well, even though exceptions remain, especially the already mentioned US 'Orshansky' poverty line. In the UK, the then Department of Social Security began publishing figures of relative poverty in the 1980s (Hills, 2004, p. 40). But this did not mean endorsement by the government, which, on the contrary, explicitly dismissed the concept (see House of Commons, Hansard Debates, 22 November 1990; Joseph and Sumption, 1979, pp. 27-28; Stewart et al, 2009, p. 7). It was not before the late 1990s that the relative poverty measure became the basis of official government policy. The most important step was the adoption of quantitative targets for the reduction of relative child poverty, followed by a similar pledge to eradicate relative pensioner poverty (Stewart et al, 2009, pp. 10-12). The promotion of relative poverty to a quasi-official status was initially a consequence of the 1997 change in government, but it soon ceased to be a party-political dividing line. Before long, both of the then-opposition parties also explicitly approved of the concept (see Liberal Democrats, 2007; Conservative Party, 2008; BBC News, 2006; Hunt and Clark, 2007). Since then, this has been the basis of the political debate on poverty. When the interim child poverty target in 2005 was missed, the opposition parties presented this as a failure of the government's policies, while the government emphasised how much progress towards the target had been made. Thus, the debate was now entirely about whether the government was successful in reducing relative poverty, *not* about whether relative poverty was a sensible policy focus (e.g. Hunt and Clark, 2007). Relative poverty had become, as Hills (2004, p. 42) put it, "*the nearest that the UK has to an official poverty line*".

2.4 The long-term impact of the 1960s 'rediscovery of poverty'

The abandonment of the Booth/Rowntree framework of assessing poverty, and its replacement with a relative understanding and measurement, had far-reaching consequences. To illustrate why, it is necessary to provide an overview of how the different approaches to poverty measurement have, at different times, led to different perceptions of the phenomenon.

As documented above, the early BSA poverty studies of the late 19th century, which had revealed how widespread poverty still was even by ascetic standards, had shocked many

contemporaries. But paradoxically, even though the initial BSA studies provided a very glum outlook, the period of BSA research as a whole ultimately made for an optimistic case. As mentioned, the poverty studies of the BSA period were local surveys, so their results cannot be aggregated into a national average. But taken together, they do convey the impression of a falling trend, even if far from linear and at times stubbornly slow (see Horton and Gregory, 2009, pp. 1-6; Pichaud and Webb, 2004, pp. 33-47; Linsley and Linsley, 1993). Unsurprisingly, the early 1930s witnessed a rebound, but not a return to the conditions observed around the turn of the century. Rowntree's1936 study found a very high working-class poverty rate of 31.1%, but this was against the expanded poverty basket described above. The abject poverty that Rowntree's original indicator had measured had fallen by over half. Given the economic context, this shows that Britain had become more poverty-resilient.

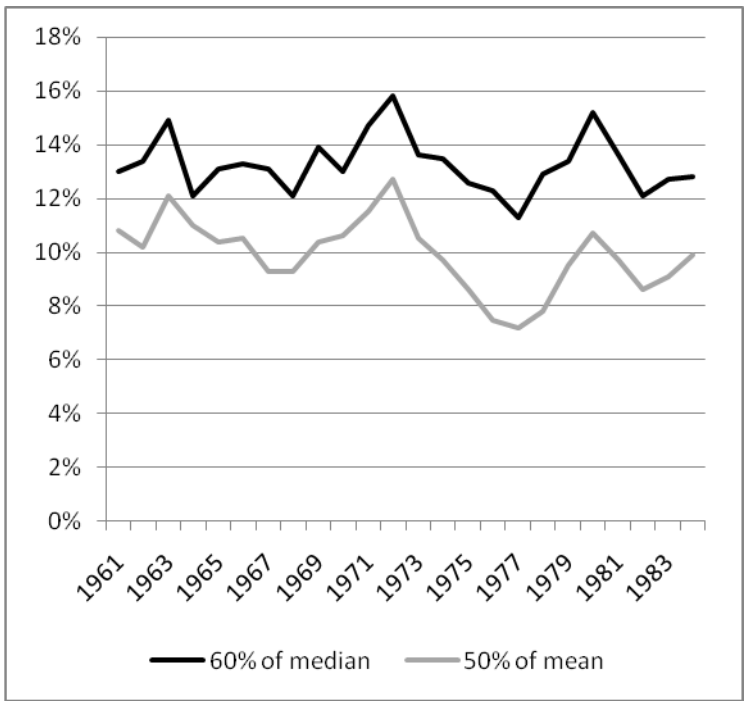
If the 1930s results gave reason for a cautious, tentative optimism, Rowntree's 1950 study strengthened it. This survey produced a poverty rate of 2.8% among the working class population, which corresponded to 1.6% of the total population. So according to the last Rowntree study, poverty had virtually disappeared. Hatton and Bailey (2000) document how this gave rise to a widespread optimism about the vincibility of poverty, visible in newspaper headlines like "The ending of poverty" and "Poverty almost down and out". *"Perhaps the most striking testimony to this is the fact that no subsequent surveys of the type pioneered by Rowntree, and which flourished in the interwar period, were conducted after 1950"* (ibid, p. 518). In 1962, Townsend noted: *"The belief that poverty has been virtually eliminated in Britain is commonly held"* (Townsend, 1962, p. 210).

Rowntree's figures must not be taken at face value. Even by his rather ascetic standards, the declaration of the near-disappearance of poverty was premature. Hatton and Bailey (2000) later re-examined the findings and found that Rowntree had underestimated price increases, while overestimating the impact of the reforms inspired by the Beveridge report. Correcting for this, the poverty rate would have stood at 11.8% among working-class households, equivalent to 7.1% for all households (ibid, p. 530). But given the economic context (see Cairncross, 1995, pp. 45-86), these are still remarkably low figures. Rowntree erred about the level, but not about the downward tendency of BSA poverty.

So in the end, the same BSA method which had initially produced a bleak picture was now promoting an optimistic outlook. It created the impression that economic progress,

combined with a social safety net, could eventually overcome poverty. However, this outcome was specific to the understanding of poverty on which the BSA was built. The new relative measure showed a completely different picture. Relative poverty rates were substantially higher than BSA poverty rates, contradicting the notion that poverty had disappeared, or was close to disappearing. But this was not the major difference which followed from the change in measurement. The relative poverty line was more generous than Rowntree's 1950 BSA poverty line, but as described, this was not really a novelty because Rowntree's poverty lines had also become more generous over time. The major difference was in the time trend. The period of BSA poverty research had produced poverty rates that were falling over time, albeit slowly and erratically. Relative poverty rates, in contrast, showed no clear trend for a long time, as the figure below shows.

Figure 2.1: Relative poverty rates in the UK, 1961-1984, two specifications



-based on data from IFS (2012)

When the BSA concept was abandoned, the possibility of 'outgrowing poverty' disappeared with it. In the newly emerging relative understanding, economic progress ceased to be an effective force against poverty. In this understanding, poverty was no longer viewed as a lack of material resources per se, but as a lack of material resources insofar as these are necessary to comply with contemporary social norms. These norms, in turn, were deemed to become more demanding as societies grew wealthier. Participation in mainstream

society thus becomes costlier with rising average living standards. The effect of economic progress on poverty, unequivocally a benign one in the old BSA framework, now becomes an ambiguous one. One the one hand, it tends to raise the material living standards of the poor. But it also tends to raise social norms and expectations, and thus the cost of social inclusion which the poor face. Economic progress acquires properties of a zero-sum game, where increases in the living standards of the poor can be offset by the greater cost of social participation which the same process has produced.

This change in the evaluation of the role of economic progress can already be seen in the change in vocabulary that accompanied the rediscovery of poverty. According to Townsend, economic progress resulted in

"new obligations and expectations placed on members of the community" (Townsend, 1979).

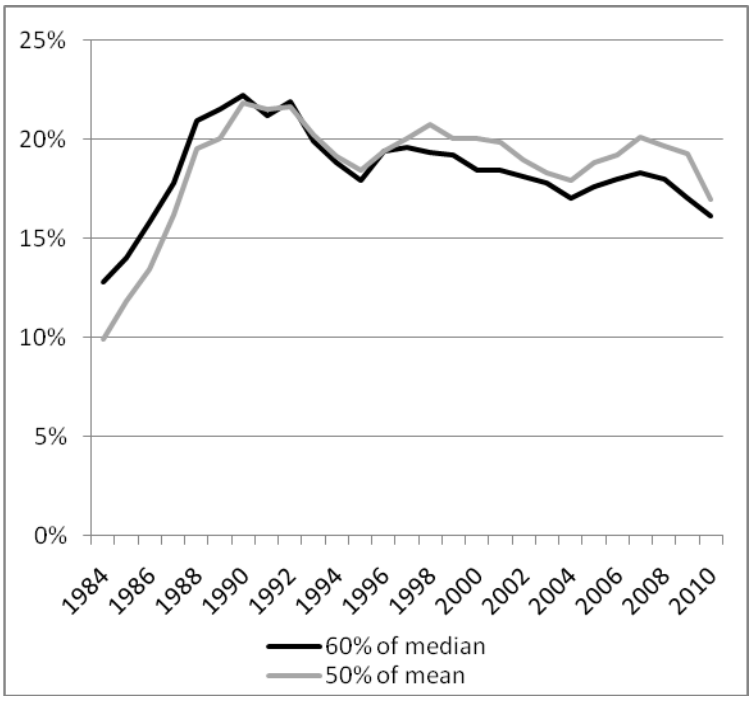
Even more to the point, Brady (2003) later argued:

"as a society's standard of living rises, more expensive consumption is forced on the poor to remain integrated into society" (ibid., p. 9).

Such a terminology would be difficult to imagine in a BSA poverty report. The implication is not just that the BSA-notion of 'growing out of poverty' becomes impossible. It also becomes impossible to overcome poverty for good, because the emergence of new obligations and expectations is an on-going process, which can always reverse the progress that has been made in the past. Poverty alleviation therefore also requires an on-going effort; it becomes permanent 'work in progress' rather than a project that is eventually finished. Announcing an 'ending of poverty' would no longer be meaningful within the new framework.

These are largely theoretical considerations, but from the mid-1980s onwards, they had important implications which could not have been foreseen at the time of the rediscovery of poverty. Between 1984 and 1990, relative poverty exploded, rising to 22% of the British population. This increase was later followed by a moderation, but it has never been reversed. Since 1995, relative poverty rates against 60% of the median have moved within a rather narrow band between 16% and 20%. These rates refer to the population as a whole, but the basic trend is recognisable for all household types, albeit with differences in timing and magnitude (see IFS, 2012).

Figure 2.2: Relative poverty rates in the UK, 1984-2010, two specifications



-based on data from IFS (2012)

The return of high poverty rates has not remained without consequences. As already mentioned, in the 1960s, Townsend (1962, p. 210) had summarised the prevailing attitude towards poverty with the phrase: *"The belief that poverty has been virtually eliminated in Britain is commonly held".* Today, it is this belief itself which has become virtually eliminated: In a 2006 Ipsos MORI survey, it was held by only 8% of the respondents.[10] Meanwhile, the opposite view has experienced a rebound. The British Social Attitudes Survey contains a question which reads:

*"Some people say there is very little **real** poverty in Britain today. Others say there is quite a lot. Which comes closest to **your** view, that there is very little real poverty in Britain, or, that there is quite a lot?"*(NatCen Social Research, 2012, pp. 165-166; emphasis in the original).

The question is not included in every single year, but whenever it has been included, this finding has been repeated.

[10]This is the share of respondents who agreed with the statement "There is no such thing as poverty in Britain" (Ipsos MORI, 2006).

Table 2.1: Perceptions of the prevalence of 'real' poverty in contemporary Britain: % of respondents answering there was 'quite a lot'

	% responding "quite a lot"
1986	55%
1989	63%
1994	71%
2000	62%
2003	55%
2006	52%
2009	58%

-gathered from NatCen Social Research (2012, pp. 165-166)

A majority of the respondents choose the *"quite a lot"* option, and the responses appear to be loosely related to the evolution of relative poverty rates. Concluding that relative poverty figures directly inform public opinion on poverty would be too speculative, but it does stand out that both the sharp increase in the latter half of the 1980s, as well as the later moderation, find their parallels in the BSA responses.

What exactly 'quite a lot' means is not specified, except for child poverty, where respondents are asked:

"Of every 100 children under 16 in Britain, about how many do you think live in poverty?"(ibid., p. 168).

A majority believes this rate to be at least 20%, and about a third believe it was at least 30%. Only 2% of the respondents believe there was no child poverty.

Table 2.2: BSA respondents' estimates of child poverty rates in the UK

	2001	2008
≥10%	83%	78%
≥20%	62%	54%
≥30%	41%	36%
≥40%	28%	24%

-based on data from NatCen Social Research (2012, pp. 172)

The evolution of poverty rates shown in the two graphs above has become the basis of a widely accepted 'poverty narrative'. Pantazis et al (2006), for example, summarise the post-war evolution of poverty in the following terms:

"During the 1960s, just over 10% of the population lived in a low-income household. This rose slightly under the Conservative administration and following the oil shock in the 1970s,

and then declined to about 8% during the mid-1970s. In 1979 [...] changes in economic and social policy resulted in a trebling of the proportion of people living in low-income households from 8% to 25% - clearly showing that governments do have an effect on the amount of poverty in a country and that social policy does make a difference" (Pantazis et al, 2006, p. 4).

A similar account is provided by Horton and Gregory (2009, pp. 4-10), who see poverty in post-war Britain as emerging in a U-shaped manner, defined by two decisive turning points. The foundation of the post-war welfare state is seen as the onset of a sustained decline in poverty. The 1980s, which the authors view as an era of 'welfare retrenchment', represent the second turning point (the bottom of the 'U'). In their interpretation, the subsequent *"huge increase in poverty"* represents *"one of the greatest social transformations of modern times"*(ibid.). Similar views have been expressed by Stewart et al (2009, p.2), Andrews and Jacobs (1990), Glynn and Booth (1996), Jones and Novak (1999), Kastendiek (1999), Kelly (1999), Gregg et al (1999) and Sefton et al (2009).

This interpretation, while somewhat over-stylised, is fully consistent with a relative understanding of poverty. But it is also very specific to this understanding, in the same way as the 'ending of poverty' narrative of the 1950s was specific to the original understanding, i.e. the one which underpinned BSA-research. If there had been no change in the measurement of poverty, the above-mentioned 'poverty narrative' could not have emerged. Within the BSA framework, the stagnant poverty rates of the 1960s and 1970s would have been very difficult to imagine, and the rebound of poverty from 1984 even more so. This is because BSA measures, even amended ones along the lines of Rowntree's later studies, could only have shown a rebound if there had been a fall in the living standards of low earners. Chapter 3 will show that no such fall has occurred. The switch to a relative measure was a *sine qua non* of the above-described poverty narrative. Since poverty is not just a variable like any other, it is no exaggeration to say that the change in poverty measurement has shaped popular perceptions of post-war economic and social history as a whole.

With this in mind, what would today's poverty debate look like today if the 'rediscovery of poverty' of the 1960s had never occurred? In the absence of a counterfactual, this can only be speculated about. But an informed guess would be that without a rediscovery, the 1950s narrative of the 'ending of poverty' might well have remained unchallenged. The mainstream interpretation today would then be that poverty in Britain was largely

overcome for good in the 1950s, or slightly later. This means that poverty would today be seen as a problem limited to specific vulnerable groups, such as the homeless, not as a wider social phenomenon. If so, it would not even be expressed as a percentage of the population, but as an absolute number – the very concept of the 'poverty rate' might no longer be in use. The topic would probably still be part of the public policy debate, in the same way as homelessness is still part of it. But it would be debated in a very different way. First of all, it would not be seen as a function of wider social and economic policies. Social and economic policy debates would be largely divorced from the poverty debate, because the latter would be limited to marginalised groups which are beyond the reach of the traditional social safety net and the formal economy. Helping these groups requires separate, and very specific policy instruments. They cannot be reached by a change in benefit rates, an increase in the minimum wage, or a lifting of the income tax threshold.

The above is necessarily speculative, but the situation in Japan provides some ground for it. Japan is one of the few developed countries where, according to Osamu's (2007) social attitude survey, the concept of relative poverty has never gained ground. The majority of Osamu's respondents believed there was no poverty anymore in contemporary Japan. The existence of low-paid occupations, gaps in the safety net etc. were recognised, but not associated with the term poverty.

Japan and the UK are thus characterised by completely different 'poverty narratives', despite the fact that in terms of relative poverty figures, the two countries are not far apart (OECD.StatExtracts, 2012). This would not be especially noteworthy if it simply reflected differences in the general understanding of poverty between the two countries. If there was a 'British understanding', more relative than absolute,[11] and a 'Japanese understanding', more absolute than relative, both narratives could be equally valid, each on its own terms.

But this is not the case. It has been documented above that in poverty research, in international organisations and among policymakers, the predominant understanding of poverty is a relative one. But this is not true for the wider population. The British Social Attitudes Survey (BSA) contains an enquiry into how poverty is commonly understood. It presents respondents with the following three options, asking them to agree or disagree:

[11]The distinction between relative and absolute should be seen as a continuum rather than a dichotomy, see previous chapter.

"Would you say that someone in Britain was in poverty if they had enough to buy the things they really needed, but not enough to buy the things most people take for granted?"

"Would you say that someone in Britain was in poverty if they had enough to eat and live, but not enough to buy other things they needed?"

"Would you say that someone in Britain was in poverty if they had not got enough to eat and live without getting into debt?"

The first statement can be seen as a rough description of the idea behind relative poverty. The last statement is closest to the old understanding of poverty which underpinned BSA measures. The statement in the middle falls somewhere in between. The last statement is uncontroversial; 90% of respondents agree that this describes a state of poverty. The middle statement still receives widespread support, with 47% agreeing, but the purely relative definition is accepted by only 19%. This shows that while poverty is generally *measured* in relative terms, it is not generally *understood* in relative terms. Since the 1960s, the statistical measurement behind the term 'poverty' has increasingly been replaced, but the connotations that the term evokes have not. This is problematic given how much relative poverty figures shape perceptions of the extent and evolution of poverty.

There are no detailed enquiries into how relative poverty figures are generally interpreted by the public. What can be documented, though, is how these figures are generally represented by opinion leaders specialising on the subject, that is, by anti-poverty campaign groups. These groups frequently mistake relative poverty figures for figures of absolute poverty (or material deprivation). More precisely, they use the attribute 'relative' as if it referred to the severity of poverty: 'relative poverty' is used as if it was a synonym for 'a less severe form of poverty'. This is not what relative poverty means – as explained in the previous chapter, the relative/absolute distinction is not about depth or severity – but this is the way relative figures are represented by poverty campaigners.

A case in point is the 'Zero Poverty' campaign by Caritas Europa (2010), which argues: *"Around 78 million people in the 27 EU member states (16% of the total population) […] live on or below the poverty line. They often lack money for the bare essentials such as fuel for heating, clothing and minor repairs."* The poverty rate and headcount cited here belong to a relative definition. But the interpretation would belong to either a material deprivation

index, or to an absolute measure based on the cost of the mentioned items. The figures and the interpretation cannot be meaningfully combined in this way. The relative poverty figures cited here do not convey any information about which goods people cannot afford – this is not what relative poverty figures are designed to do. The combination would only be meaningful if 'relative' meant 'less severe' – poor, but not desperately poor.

The same applies to a statement by Save the Children (2009), a charity and campaign group, which argues: *"[I]n the UK, 3.9 million children live in poverty. Many don't have access to warm winter clothing, nutritious food, decent housing or education."*Again, the 3.9m headcount is a figure of relative poverty, but the description is one of material deprivation or absolute poverty.

A conceptual error of a similar type is committed when relative poverty rates are contrasted with a country's overall level of economic prosperity. End Child Poverty (n.d.), for example, argues that *"4 million children – one in three – are currently living in poverty in the UK, one of the highest rates in the industrialised world. This is a shocking figure given the wealth of our nation."* Similarly, Oxfam Great Britain (n.d.) comments: *"The UK is the fifth richest country in the world. Until the recession hit in 2008, it had experienced an unprecedented period of growth over the last 10 years. Yet this has not benefited the poorest in society."* Both groups are implying that poverty rates ought to fall as an economy grows, and that the richer a country is, the lower its poverty rate ought to be. This would be a reasonable claim to make for an absolute poverty or a material deprivation index, but there is no theoretical reason why relative poverty rates should be related to GDP or growth rates. Oxfam and End Child Poverty, too, conflate the figures belonging to one poverty measure with an interpretation belonging to another poverty measure. This misunderstanding is more than just a technical one. Mixing two distinct concepts in this way deprives both of their meaning. It conveys the incorrect impression that economic progress had no impact on living standards at the bottom end of the income distribution.

A different version of the same underlying fallacy is presented by the Child Poverty Action Group (CPAG, 2009). They argue that "*international evidence [shows] that income inequality and poverty are very closely linked"* (ibid.: 17), a point which they demonstrate by plotting the relative poverty rates of several OECD countries against their Gini-

coefficients. However, the close link with inequality is already part of the mathematical definition of relative poverty, rather than something that needs to be shown empirically.

All of these examples are different variants of the same confounding: Relative poverty figures are used and interpreted as if they were absolute poverty figures (or material deprivation figures). The misunderstanding seems to be that 'relative' simply meant 'less severe', as if relative poverty was merely absolutely poverty with a more generous poverty line.

The claim made here is *not* that anti-poverty campaign groups are representative of the general public. The fact that campaign groups use relative poverty figures in the above-described way does not mean that the wider public interprets them in this way. The claim made here is a more cautious one: It is unlikely that large numbers of people retrieve poverty figures directly from the source (the ONS and the DWP), rather, these figures will be disseminated through mediators. They are cited in the media, often accompanied by comments from poverty campaign groups. *To the extent* that poverty campaign groups affect public opinion, the above-described misinterpretations can be expected to be more widespread, but it is unknown how large that extent is. Ideally, the public's understanding of poverty concepts and their reception of poverty figures should itself be part of poverty research. This will be explained further in the final chapter. For now, suffice it to say that it would be feasible to test the hypothesis that 'relative' is misunderstood to mean 'less severe'. A question along the following lines could be included in the BSA, or some other suitable large-scale survey:

> *"Between 16% and 20% of the British population live in <u>relative</u> poverty. What exactly does this mean? Please choose <u>one</u> of the five options below.*
>
> 1. *It means that between 16% and 20% of the British population are poor, but not necessarily destitute – they are 'relatively poor', as in 'somewhat poor'. They are not lacking food, or a roof over their head, but they may be unable to afford other necessities like a warm winter coat or public transport.*
> 2. *It means that between 16% and 20% of the British population earn substantially less than the average income in Britain. This figure does not tell us what these people can or cannot afford.*

3. *It means that between 16% and 20% of the British population are destitute. They may be homeless, they may have their electricity turned off, they may rely on food banks, and/or they may frequently have to take out payday loans.*
4. *It means that between 16% and 20% of the British population, while not desperately poor, are poor when compared to the wealthiest families in the UK. They are not lacking food or a roof over their heads. But compared to those families that have two or more cars, a second home etc., these 16-20% are, relatively speaking, poor.*
5. *It means that between 16% and 20% of the British population, while not desperately poor, are poor when compared to the average incomes in the EU. They are not lacking food or a roof over their heads, but compared to the living standards observed in some of our neighbour countries, these 16-20% are, relatively speaking, poor."*

Poverty campaign groups typically represent relative poverty figures as if Option 1 (or even Option 3) was the correct one. To the extent that these opinion formers influence perceptions among the general public, relative figures would promote a perception that economic progress fails to improve the material situation of the least well-off. This is not what relative poverty figures show, but it is not a misunderstanding that could be easily rectified. Arguably, the fact that relative figures contain no information on what it is that those on the lowest incomes can or cannot afford makes relative poverty an inherently counterintuitive concept. This lack of intuitiveness may well be the source of the above-described misunderstandings. A poverty measure which cannot say anything about what poor people lack is just not compatible with the way the term 'poverty' is commonly understood.

Yet if so, this downside would not only apply to relative figures. The quasi-absolute measure used in the UK, which sets the poverty line at 60% of the median of the year 1998, contains no such information either. Modern poverty research has largely ceased to document the living standards of the poverty population it identifies.

Therefore, the next chapter will address this issue explicitly. It will provide a comprehensive account of how the living standards of the least well-off in the UK have evolved over the past decades.

3. The evolution of living standards at the lower end of the distribution

Poverty rates are the combined result of a measure of living standards and a method to set thresholds. This chapter will isolate one blade of the scissors. It will look at how living standards of the least well-off have evolved over the past decades, according to various measures. The emphasis is on living standards as such; the question of whether or not any particular living standard should be classified as 'poverty' will be of secondary importance.

If this thesis had been written during the period of BSA poverty research, there would have been no rationale for including a separate discussion on living standards. The topic would automatically have been covered, as the measurement of poverty and the measurement of living standards were inseparable.

Contemporary poverty measures, however, are at best loosely related to living standards. This is why contemporary poverty research is often far removed from the underlying living standards. From most poverty studies, it is not possible to deduce any information on what poor households are lacking in their everyday lives. This is problematic because, as the last chapter has shown, these measures are nevertheless widely interpreted as direct measures of material living standards at the lower end of the distribution.

Yet measuring living standards is not nearly as straightforward as it may seem. Living standards do not simply 'rise' or 'fall'. Relative prices change, the volatility of income streams changes, and so does the role of non-market determinants of living standards. The combined result is that contemporary low-earners find some goods and services easier to access than ever, while their access to other goods and services has not improved at all, or even worsened. Any single measure of living standards can only provide a partial picture, and in order to gain a comprehensive picture of how the least well-off have fared over the past decades, different measures need to be sensibly combined.

Households which appear to attain similar living standards according to one indicator may end up with very different living standards according to another indicator. Unlike different poverty measures, different measures of living standards tend to be correlated, but this does not mean that one measure can easily substitute another. This chapter will provide an

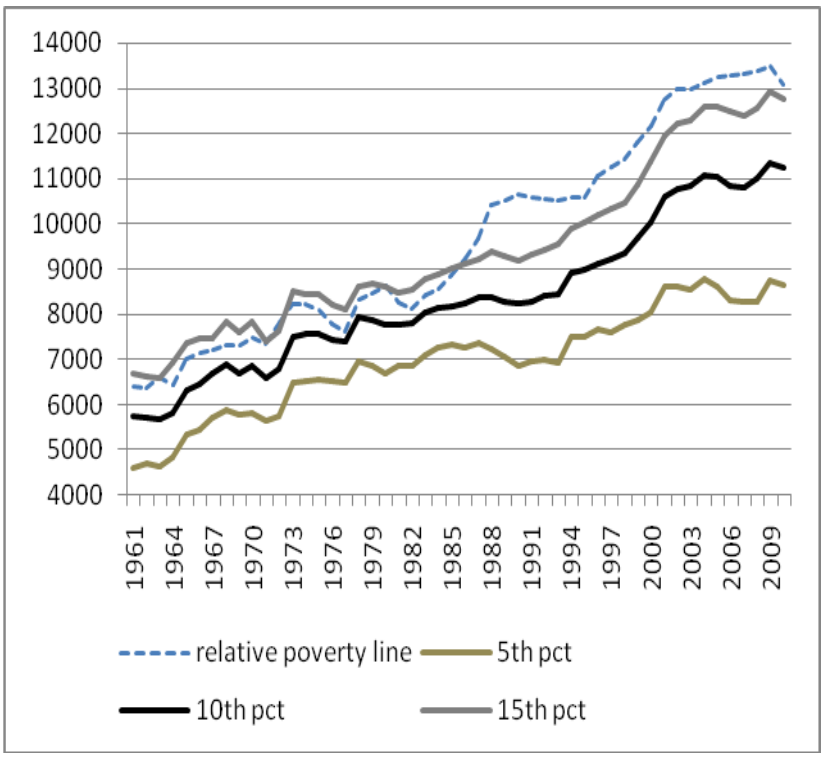
overview of how the living standards of the least well-off have evolved over the past decades, and the aim is to do so in a more comprehensive way than previous studies. None of the subchapters is truly original; they are mainly discussions of, and minor additions to, studies which already exist. But the aim is to provide something which is novel as a package.

This chapter has one immediate aim, and a more distant additional one. The immediate aim, as mentioned, is to fill a gap left by contemporary poverty measurement. The results of most poverty measures are very indicator-specific; they do not reveal much about living standards as such. But this chapter also has a broader function within the overall objective of the thesis. Chapters 6 and 7 will later propose a different approach to measuring poverty, and one of the principal aims will be to overcome the current measures' detachedness from the living conditions of the least well-off. But this could not be done without first establishing a detailed and comprehensive account of what these living conditions look like, and where the difficulties in measuring them lie.

3.1 Real incomes

The simplest indicator of living standards among the least well-off is real incomes at the lower percentiles of the income distribution. The figure below shows how annual real disposable incomes at the 5th, the 10thand the 15thpercentile of the distribution have evolved from 1961 to 2010. The monetary value of the relative poverty line, i.e. 60% of the contemporary median, has also been included. All figures are equivalised, with the reference unit being a two-adult household without children, and expressed in prices of 2010. Incomes are measured after direct taxes and cash transfers. They include wages and salaries, self-employment income, capital income, occupational and private pensions, as well as government transfers, all net of direct taxes.

Figure 3.1: Real annual disposable incomes at the 5th, 10th and 15th percentiles of the distribution, UK, 1961-2010



-author's calculation based on data from IFS (2012)

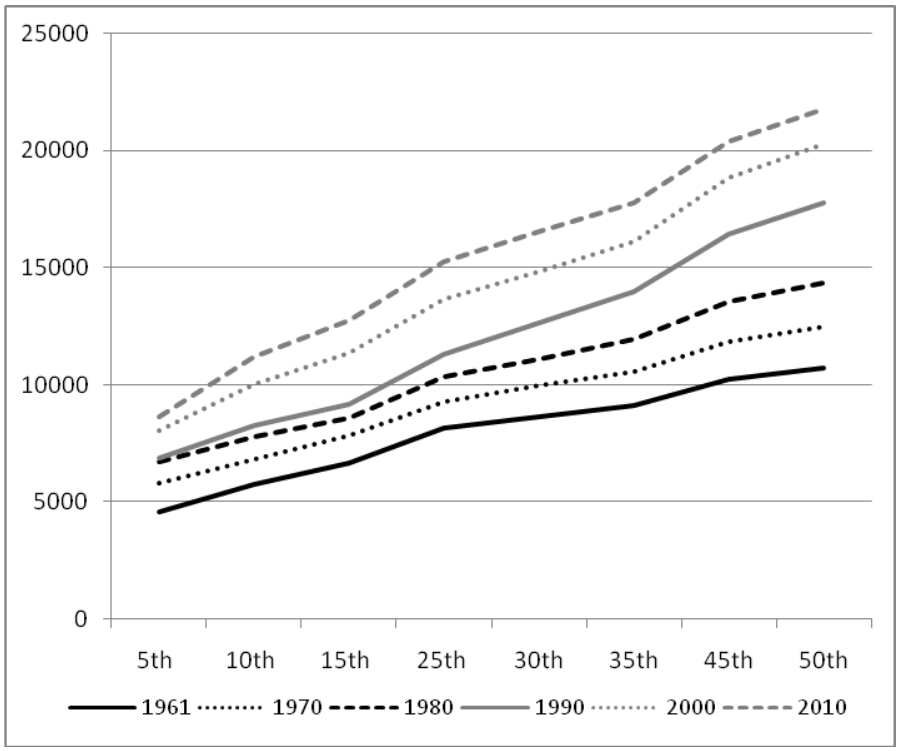
It shows that the 1980s were indeed a period of unusually slow income growth for the lower percentiles. Over the whole decade of the 1980s, real incomes at the 10th percentile grew by just 7%. Nevertheless, the strong increase in relative poverty between 1984 and 1990 is mostly driven by increases in the poverty line, which grows by about 25% in this period. It overtakes the 15th percentile in 1986, and then pulls well ahead of it.

During the whole period from 1961 to 2010, real income at the 10th percentile nearly doubled, reaching a level equivalent to median incomes in the early 1960s. The 10th and the 15th percentile evolve largely in parallel, with the latter growing slightly stronger. A different picture emerges for the 5th percentile, where real incomes do indeed fall in the latter half of the 1980s, and where the growth path becomes increasingly erratic. The reasons will be explored later.

A different way of looking at the same development is shown in the figure below, which shows the lower half of the income distribution, in constant 2010 prices, in ten-year intervals. The distributions of 1970 and 1980 can be thought of as more or less parallel upward shifts of the distributions of a decade earlier. The same is true for 2000 and 2010.

The decade of the 1980s is the outlier and the turning point, which produced a much steeper gradient that has remained since then.

Figure 3.2: Income distributions (lower half) in the UK in selected years, annual incomes in constant 2010 prices, by percentile



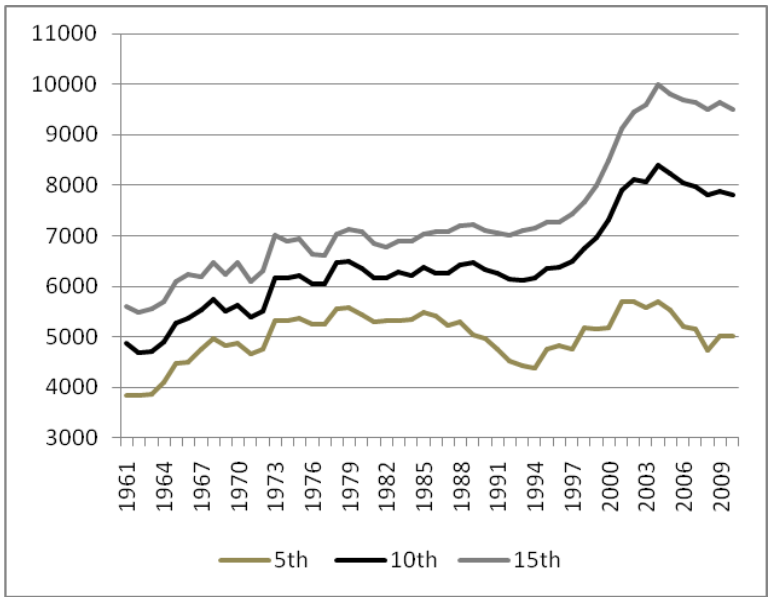
-based on data from IFS (2012)

Real income data are also available net of housing costs, that is, after subtracting rents, mortgage payments and close equivalents. Subtracting housing costs produces an entirely new income distribution. Households are now sorted according to the income they have left once housing costs have been subtracted, regardless of the incomes they had before. Thus, those at the bottom of the income distribution after housing costs (AHC) are not necessarily the same people as those at the bottom of the income distribution before housing costs (BHC). Those occupying the low percentiles of this new AHC income distribution are characterised by some combination of low incomes and high housing costs.

Real incomes at the lower percentiles of the AHC income distribution convey a much more pessimistic impression. Between 1973 and 1994, a two-decade long virtual stagnation of the lowest AHC incomes can be observed. The decoupling of the 5th percentile from the mid-1980s onwards is much more pronounced on this measure. Income AHC cannot reflect improvements in the quality of housing, but the divergence between incomes BHC and AHC is so large that changes in housing quality alone are unlikely to explain it. From the 1970s

onwards, housing costs have become an increasingly strong determinant of living standards at the lower end.

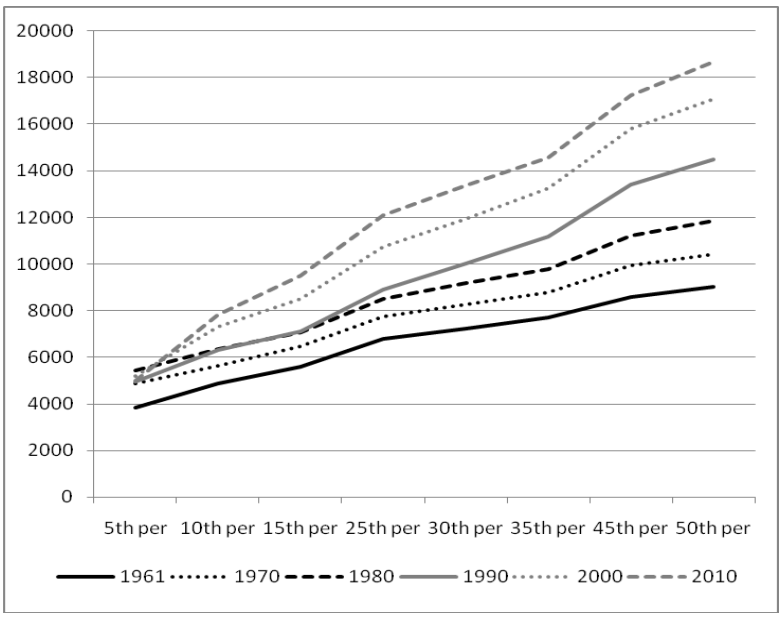
Figure 3.3: Real annual disposable incomes after subtracting housing costs at the 5th, 10th and 15th percentiles of the distribution, UK, 1961-2010



-based on data from IFS (2012)

This impression is confirmed by looking at AHC income distributions in ten-year intervals. The steepening of the gradient in the 1980s is also apparent here, with the magnitude of the upward shifts being more modest at the lower end. The decoupling of the 5thpercentile from the rest of the income distribution is clearly visible here. Instead of a succession of parallel upward shifts, it looks more like an outward rotation around an anchor, which is the 5th percentile.

Figure 3.4: Income distributions (lower half) in the UK in selected years, annual incomes after subtracting housing costs in constant 2010 prices, by percentile



-based on data from IFS (2012)

On the whole, this provides a mixed picture. Incomes at the 10th and 15th percentiles have about doubled, but progress is much less impressive on an AHC basis. The very low percentiles, meanwhile, have become decoupled from the rest of the distribution. This is especially pronounced for AHC incomes, but it is also recognisable in the conventional income distribution.

3.2 Expenditure

Whether measured before or after housing costs, income measures for selected percentiles are a very incomplete measure of living standards. The most obvious limitation of income data is that they only offer a 'snapshot' perspective, limited to a single point in time.

In macroeconomics, this limitation and its implications have long been recognised. In 1957, Friedman (1957) first formulated the Permanent Income Hypothesis, modelling income as the sum of a permanent and a transitory component. Permanent income referred to a household's 'typical' income situation, their average income over a longer period. Transitory income referred to unsystematic deviations, positive or negative, from this long-term average. Friedman expressed household consumption as a function of permanent income alone, unaffected by momentary fluctuations. Since most people were averse to

large and unpredictable fluctuations in living standards, they engaged in 'consumption smoothing', building up a stock of savings and assets in some periods and drawing upon it in others. Momentary income can be unrepresentative of permanent income, but spending will usually be closer. This provides a case for approximating living standards through expenditure rather than income.

It is most obvious in the case of the self-employed and freelancers, whose income situation is generally volatile. The income situation of employees is more even, but the split of income into permanent and transitory components applies to them as well. Reasons can include bonus payments, one-off extra income sources, parental leave, periods of retraining, short-term unemployment, temporary short-time work, or temporary pay cuts.

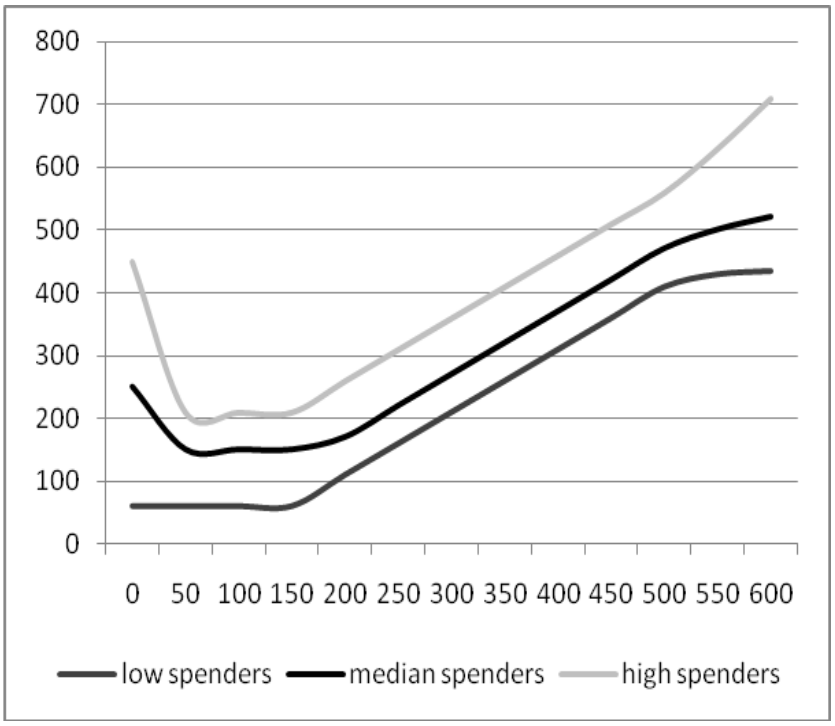
Research on the nature and extent of consumption smoothing has therefore become standard in macroeconomics, but its impact on poverty research has remained limited. The fusion of research on consumption smoothing with poverty research is probably most advanced in the US, where the relationship between income and spending specifically in the lowest deciles has become more intensively researched and better understood since the 1990s (see Meyer and Sullivan, 2003 and 2006). Research covering UK data has not yet reached this stage, but this may be about to change, with a more substantial body of research on the subject building up in recent years (see Goodman and Webb, 1995; Blow et al., 2004; Attanasio et al, 2006; Brewer et al.,2006; Blundell and Etheridge, 2008; Brewer and O'Dea, 2012). The most relevant data source is the Living Costs and Food Survey (LCFS), the successor of the Expenditure and Food Survey (EFS). The expenditure studies' basic approach is to hold income levels at various points of the distribution constant, and examine the variation of expenditure at these given levels. Where systematic deviations and irregularities arise, expenditure studies formulate and test hypotheses which might explain this. Taken together, this literature significantly improves the understanding of how the living standards of the less well-off have evolved over the past decades. But all of these studies also provide notes of caution, pointing out that the reasons for the divergence of income and spending data are not yet fully understood. Several hypotheses can be safely ruled out, and some factors can safely be considered partial explanations, but that is as far as the research in this field currently goes. The remainder of this subchapter will summarise this current state of research.

For the largest part of the income distribution, income and spending data are reasonably strongly correlated. There is a lot of variation in spending at any given level of income, but

this variation is itself not without regularity. The literature can be summarised by using a hypothetical numerical example which, albeit highly stylised, captures much of what is known about the relationship between spending and income. It is shown in the graph below, which plots income against spending (in gold coins), excluding, for now, the very bottom of the distribution. Each income level corresponds to an expenditure distribution, which, for the sake of simplicity, has been reduced to three levels: Low spenders, medium spenders and high spenders. (These could be, for example, the 25th, the 50th and the 75th percentile of the expenditure distribution.) Among those earning more than 150 gold coins, medium spenders always spend a little bit less than they earn, which is shown by the distance to the dotted 45°-line. High spenders' expenditure is always substantially above, and low spenders' expenditure substantially below their recorded income, which can again be seen by the distance to the 45°-line. Due to this large spread, the expenditure distributions belonging to the different income levels overlap, which means that income levels could not be deduced from observing individual spending behaviour alone. However, the spread between high spenders and low spenders does not vary systematically across income levels. Once somebody's position in their respective expenditure distribution is controlled for, income becomes a good predictor of spending. When comparing high (medium, low) spenders only with other high (medium, low) spenders, the correlation between income and spending is very high. So despite its fluctuations, income remains a useful indicator of living standards throughout most of the distribution. Fluctuations are not completely random, and momentary income still has some impact on momentary spending.

This relationship holds for most of the income distribution – but it ceases to hold at the tails. At both the upper and the lower end of the distribution, the spread between high spenders and low spenders becomes larger, and median spending moves further away from income. While income goes all the way down to zero, spending does not. It eventually hits a floor, giving rise to the 'ice hockey stick' shape shown in the graph. Real-world data is, of course, a lot messier than the stylised example: In the actual data, it would be difficult to identify where exactly the turning points of the various ice hockey sticks are. But plateau levels below which expenditure does not fall are clearly recognisable. At this part of the distribution, income has now become completely unrepresentative of expenditure.

Figure 3.5: Stylised summary: The relationship between income and spending



At the very lowest percentiles, expenditure levels of median spenders rise again, and those of high spenders even more so. Those whose incomes are close to zero or below attain a higher average spending level than those whose incomes are merely low. The spread between low spenders and high spenders is also much larger than for other percentiles, suggesting a much more heterogeneous composition. The households in these percentiles attain very different living standards even though they notionally record identical incomes. The spread is explained by the high spenders, not the low spenders, who remain on the same low plateau.

Identifying those with the lowest living standards is now no longer straightforward, because it now depends on whether 'living standards' are approximated by income or expenditure. Those with the lowest incomes are not necessarily those with the lowest expenditure. The income-poor and the expenditure-poor are overlapping, but distinct groups.

While the literature is clear on the general direction of the income-spending relationship in the UK, it is not conclusive enough on the precise figures, which is why it has been summarised via a stylised example up until here. The above graphs will now be linked to real-world data, but in a more tentative way, especially because almost all studies emphasise that there are measurement issues which have not yet been resolved.

The study by Goodman and Webb (1995) is a pioneer in this field. It plots income against expenditure using two different years, 1979 and 1992. The main finding is that the mismatch of income and spending at the lower end of the distribution has greatly intensified during this period, it could even be argued that it has only emerged then. In 1979, median expenditure still rises almost linearly with income. Only the figures for the high spenders (the 75th percentile of the distribution of expenditure given income) produce something similar to the hockey stick shape shown above, and even for them, it is not very pronounced. The figures for 1992 are very different. The spread between high spenders and low spenders is now much wider at the lower end. High spenders in the bottom income decile now record a higher level of expenditure than their counterparts in the second decile, surpassing even the high spenders of the third decile slightly. They attain about the same level as median spenders in the fifth decile. For median and low spenders, expenditure levels in the lowest and the second decile are almost identical, implying a plateau-shape as in the graphs shown above.

The authors also derive a general expenditure distribution and compare it to the income distribution. This is quite different from the analysis so far, which has held income constant, and looked at expenditure at each given income level separately. Now households are ranked according to equivalised expenditure levels, regardless of income, so that households who share a common position in the income distribution can be very far apart in the expenditure distribution. The purpose is to explore the extent of overlap between low income groups and low expenditure groups, and the result is that the overlap is not very large. Only a third of the households in the bottom income decile are also in the bottom expenditure decile, while about half of those in the bottom income quintile are also in the bottom expenditure quintile.

Between 1979 and 1992, the income distribution and the expenditure distribution have evolved in very different ways, even though their medians have moved almost in unison. Spending at the 5th percentile of the expenditure distribution has increased by 17%, and by 14% after subtracting housing costs. Incomes at the 5th percentile of the income distribution, in contrast, have been flat on a BHC basis, and falling on a AHC basis (as already shown in subchapter 3.1). So even though low-earners income has not increased, low-spenders expenditure has.

The authors point out that the reasons for this divergence are not fully understood, but argue that the changed composition of the bottom decile must have played an important

role. The decile became more heterogeneous, and groups with a generally volatile income situation replaced groups with a stable one. The share of pensioners fell while the share of the self-employed increased.

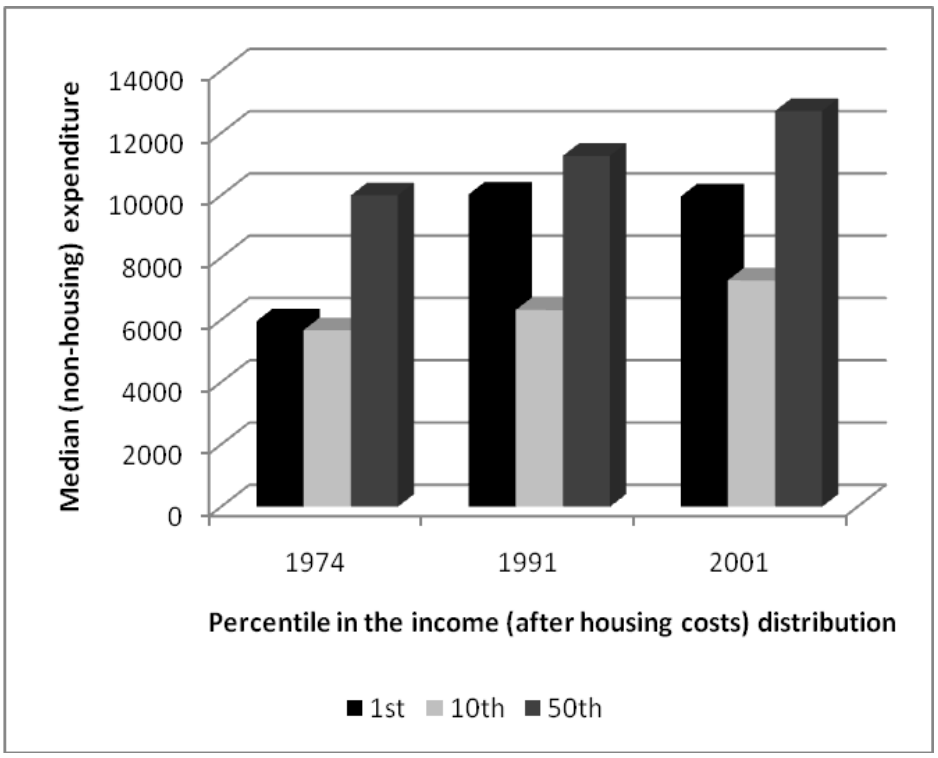
What can be ruled out is the possibility that increasing debt levels explain the gap between income and expenditure. Data on various types of debt is separately available for different parts of the income distribution, and if debt was the explanation, there would have to be a disproportional increase in indebtedness specifically at the lower end of the distribution. But the authors show that if anything, the opposite is true: There has been a general increase in the use of consumer credit financing, but low-income households were underrepresented in this development. This means that debt can explain a more general weakening of the relationship between income and spending, but not a weakening specifically at the lower end. On the contrary, debt, in isolation, should have the opposite effect: It should weaken the relationship of income and spending across the board, but less so at the lower end of the distribution. So changes in debt financing had, if anything, a moderating influence on the development of the hockey stick curve. This is echoed by other studies, and perhaps more importantly, it also becomes clear from the data on assets and debts, which will be discussed later.

The study by Goodman and Oldfield (2004) also contrasts the expenditure distribution as a whole to the income distribution as a whole. The study shows directly what the hypothetical example above has alluded to: Income goes all the way down to zero while expenditure does not. In the early 2000s, there was virtually no household in the country spending less than £50 per week (on an equivalised basis), but there were about 1m individuals in households earning less than that. Just over 0.5m of them had reported incomes of zero, which, in practice, means negative incomes that are set to zero. The two distributions have also evolved quite differently over time. Spending at the 5th percentile of the expenditure distribution shows unspectacular but steady growth throughout the 1980s and 1990s, with no major interruptions and no recognisable turning points. As a result, summary measures also differ. The Gini coefficient of expenditure rises over the 1980s, but not nearly as much as the Gini coefficient of income, and it also shows a greater degree of moderation in the early 1990s. The authors argue that increased income volatility contributed to the divergence of the two distributions, but also note that can only be a partial explanation.

In a major study using mainly data from 2001 and 2002, but also including a longer comparison over time, Brewer et al (2006) explore the relationship between income and spending after housing costs. In this study's results, the plateau levels shown in the graphs above are clearly recognisable. On an equivalised basis and not counting housing expenses, the plateau level was about £100 per week for low spenders, just under £150 for median spenders, and about £200 for high spenders. For median and high spenders, this plateau stretched from the third to about the twentieth percentile of the income distribution. In the percentiles from the 10th downwards, average expenditure is above average income, and from the 5th percentile downwards, even low spenders (the bottom quartile of the distribution of expenditure given income) spend more than their recorded income. In the lowest percentile, median non-housing expenditure is almost £200 per week, and over £300 for high spenders. Those in the bottom income percentile thus recorded about the same average expenditure as those in the 31st percentile, as implied by the upward tick at the end of the hockey sticks in the above graph.

The authors evaluate how this relationship has evolved over time, and confirm Goodman's and Webb's finding that the incongruence of income and expenditure at the bottom is a relatively recent phenomenon. In data from the 1970s, it was barely visible, even for the very bottom. This had changed completely by the early 1990s, when, in terms of median expenditure, the bottom percentile was closer to the median than to the 10th percentile of the income distribution. Over the course of the 1980s, income ceased to be a reliable predictor of expenditure at the lower end of the distribution.

Figure 3.6: Median annual expenditure at several percentiles of the income distribution, UK, selected years, both after housing costs



-based on data from Brewer et al (2006, p. 22)

The authors also derive an expenditure distribution, and contrast it to the income distribution, for several years going back until 1974. Throughout this period, median expenditure has tracked median income very closely, but the tails of the two distributions have much less in common. During the 1980s, non-housing spending at the low percentiles of the expenditure distribution rises by between 1–1.5% per year in real terms, including at the very bottom percentiles. This contrasts with falling real incomes for the low percentiles of the income distribution. So while spending data suggests that the living standards of the least well-off have increased, albeit at unspectacular rates, income data suggests that their living standards have fallen.

For the late 1990s and early 2000s, it is income data which provides the more positive impression. Incomes grow by between 2–4% at the lowest percentiles of the income distribution, while spending at the lowest percentiles of the expenditure distribution barely changes, and falls slightly at the very bottom. So when trying to identify in which periods the living standards of the least well-off were rising and in which they were stagnant, the impression one obtains can critically depend on how living standards are measured.

It can also be gathered from their data that those with low incomes and those with low expenditure have increasingly become distinct groups. The authors derive rates of relative income poverty and relative expenditure poverty, with the latter being defined as the share of households spending less than 60% of median expenditure. It is a consistent finding over the years that just over half of those in relative income poverty are also in relative expenditure poverty. However, the rates of relative poverty have also been rising on both counts, and that alone should produce a larger overlap. If the overlap remained constant overall even though one factor must have acted to increase it, another factor must have acted to decrease it. The relationship between income and spending must have become weaker at the lower end, which is just what Goodman and Webb, who hold group size constant, find.

Attanasio et al (2006) concentrate on the bottom 35 percentiles of the income distribution, for which they compare income and average expenditure. From about the 15th percentile upwards, income and expenditure are largely parallel. But moving further downwards from there on, expenditure levels off, while income declines at a steeper pace. Towards the very bottom, expenditure rises again. In this study, the rise is less pronounced than in the previous ones, but it covers more percentiles. A comparison over time confirms the finding that the divergence of income and spending widened over the course of the 1980s.

Brewer et at (2009) study the relationship between income and spending specifically for households with children in the mid-2000s. A particularity of this study is that expenditure data excludes spending on durable goods, leaving only regular purchases. The authors show that median non-durable spending among those earning between £50 and £200 per week is about £200 per week, making the stretched-out plateau shown in Figure 3.5 clearly recognisable. Low spenders in this income range (the bottom quartile of the distribution of expenditure given income) spend around £150, and high-spenders (the upper quartile) close to £250. Among those with no income at all, expenditure is considerably higher than among those with incomes in the £50-£200 range, and this is true for all expenditure levels. Among those earning £0, low spenders spend about £200 and median spenders just over £300.

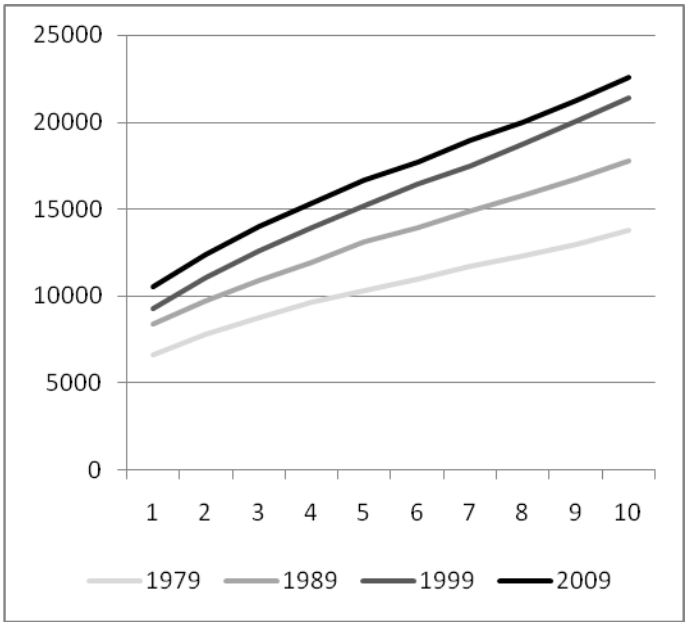
A more recent study by Brewer and O'Dea (2012) also plots income against expenditure, and finds that in the income range from just under £100 to just over £200 per week, expenditure does not differ greatly. This is, again, true for high, median and low spenders. At the very bottom, spending of all expenditure levels shoots upwards again. Among those

earning £0, median expenditure is £400 per week, about the same as among those earning nearly £500. This study also follows changes in the relationship of income and expenditure at the bottom of the distribution over time, and confirms the finding of previous studies that the two variables have become disconnected during the 1980s.

What it adds to previous studies is a disaggregation by household type. It shows that the basic tick or hockey stick shape is repeated for all social groups, even though the angle, depth and exact location of the trough/plateau differ. It also offers an augmented expenditure distribution, where spending on car and house purchases is excluded, and replaced by an imputed income stream generated by the possession of these items. Effectively, this means that the study pretends homeowners (car owners) were renting their home (car) from themselves. It is a way of making the data tenure-neutral, converting homeowners into notional renters. Changes in the relative price of housing are corrected for (because otherwise, the increase in the house price level would be counted as an increase in living standards).

The graph below shows the lower half of the expenditure distribution obtained in this way, segmented into vingtiles rather than deciles. The idea is to show how living standards have evolved over time when measured by expenditure, just as Figures 3.2 and 3.4 did for income. There are a number of commonalities between the evolution of the income distribution and the evolution of the expenditure distribution. Both show general upward movements over time, and both show an increase in the gap between the bottom and the middle during the 1980s. But there are differences. Income data have shown a decoupling of the very bottom percentiles from the rest of the distribution since the 1980s, which is not repeated by the expenditure data. Neither are there any discernible breaks.

Figure 3.7: The lower half of the expenditure distribution in selected years, UK, by vingtile



-based on data from Brewer and O'Dea (2012)

To summarise: A number of basic findings reappear throughout the literature and can therefore be considered safe, but the details are more tentative because differences remain. In the bottom decile, income is a much poorer predictor of expenditure that in other deciles. In the very bottom percentiles, the correlation between income and expenditure does not just disappear, it even turns negative: Expenditure at the very bottom of the distribution is higher than in the percentiles just above. Subchapter 3.1 has shown the 5th percentile of the income distribution to have become decoupled from the rest. It is now safe to say that this is almost certainly a statistical artefact of the income data. Income data for the bottom of the distribution has become continuously less reliable from the 1980s onwards. Since then, the income distribution and the expenditure distribution have also evolved quite differently, even though their mid-points have evolved almost identically. Spending levels of the lowest expenditure percentiles have shown unspectacular, but steady growth throughout, even when incomes of the lowest income percentiles have been stagnant. The least well-off have generally fared better according to spending data than according to income data, even though there are periods for which the reverse is true, and the finding is sensitive to what exact part of the distributions one is looking at.

3.3 Budget shares

Subchapter 3.2 has focussed on *levels* of expenditure. Expenditure has been disaggregated by deciles and percentiles, but not by purpose. It is sensible to complement this by a profile of how low-expenditure households allocate their budgets across competing needs, and how this has changed over time. In particular, the relative budget shares of basic essentials and conveniences offers a more direct account of living standards. In poverty research covering developing countries, this is a common approach (see Deaton and Zaidi, 2002; Ravallion, 1998). It is less suitable for developed countries, but can still be used as a complementary measure.

Data on household spending can be gathered from the Living Cost and Food Survey (LCFS), previously called the Expenditure and Food Survey (EFS), with data going back until 1957. The table below shows a partial expenditure profile for the population as a whole at different points in time. It shows spending on three categories built around the key necessities, as a share of the total budget. The overall tendency is a falling one. In 1957, the average British households still had to reserve as much as 58% of their budget for necessity categories. Half a century later, this share had gone down to 42%. But there are huge differences between the categories. The combined share spent on food and clothing has fallen from 43% to 20%. But the share of housing has increased, partially offsetting these gains again.

Table 3.1: Spending on essentials as a % of total household budget, all households, UK, selected years

	1957	1967	1977	1987	1997	2006
1. Housing, fuel and power	15	18	18	22	20	22
2. Food and non-alcoholic drinks	33	27	25	19	18	15
3. Clothing and footwear	10	9	8	7	6	5
Total	**58**	**54**	**51**	**48**	**44**	**42**

-gathered from ONS (2008)

For more recent years, spending data is also available for each income decile separately. The table below shows expenditure profiles for households in the lowest income decile only, rather than the population as a whole. Unfortunately, the figures on housing, fuel and power are not directly comparable across the two tables. The more recent editions of the EFS have subtracted Housing Benefit payments and mortgage interest payments from housing costs, and its successor, the LCFS, has continued this practice. The other spending

categories are, however, comparable, and data for the housing category are at least comparable within each table.

Several observations stand out. Expenditure on non-housing necessities has fallen to one fifth of low-earners' budget. This is a lower share than for average households as recently as in 1987. In a long-term perspective, expenditure profile figures point to substantial increases in the living standards of low-earners, despite a recent setback. They have to spend less on necessities, which leaves greater proportions of their budgets for items related to comfort and quality of life. Spending on goods and services related to recreation, hotel overnight stays, restaurant visits, cultural activities and communication services accounts for one fifth.

Table 3.2: Spending on essentials and conveniences as a % of total household budget, bottom decile by gross equivalised income, UK, selected years

	2003	2004	2005	2006	2007	2008	2009	2010
1. Housing, fuel and power minus Housing Benefit and mortgage payments	14	14	18	18	20	21	22	21
2. Food and non-alcoholic drinks	15	15	15	15	15	17	16	15
3. Clothing and footwear	6	7	7	6	5	5	5	5
Total necessities	**35**	**36**	**40**	**39**	**40**	**43**	**43**	**41**
4. Recreation and culture	13	12	10	11	11	11	10	10
5. Restaurants and hotels	8	7	8	8	7	7	7	6
6. Communication	4	4	4	4	3	4	4	4
Total convenience	**25**	**23**	**21**	**23**	**21**	**22**	**20**	**20**

-gathered from ONS (2004, 2005, 2006, 2007, 2008, 2009, 2010& 2011)

But the figures also show that in 2003, low-earners' spending on necessities was lower than today, while spending on conveniences was higher, as a proportion of their total budgets.[12] The recent decline in low-earners' living standard implied by these figures has occurred before the current recession. The figures for 2010 and 2007 are very similar, but both stand in contrast to the 2003 figures.

The main driver here is housing costs, and this echoes the findings from the income figures in subchapter 3.1. Housing costs appear to play an especially important role in determining low-earners' living standards, and the above figures understate the degree to which this is actually the case, due to a particularity in the way in which the LCFS/EFS treats Housing Benefit (HB). In the expenditure surveys, HB is subtracted from rent payments, which

[12] Data from before 2003 is not available in the same format.

means that it is effectively treated as a rent rebate rather than an income source. Since HB is a major component of income for many households at the lower end of the distribution, this practice has a substantial impact on the results.

Budget profiles are a very rough-and-ready measure. The distinction between necessities and optional/convenience goods is not nearly as straightforward as implied in the above tables. In reality, each of the above categories contains both necessities and 'luxuries' (goods with a high and goods with a low income elasticity of demand). By lumping very different products into large categories, these profiles miss a lot of variation. They allow a look below highly aggregated measures like income or spending, but replace it with a high level of aggregation of a different kind. But the following conclusion does not overstretch the data: Contemporary low-earners find it much easier to afford non-housing necessities, in particular food and clothing, than in previous decades. They even find it easier than average earners a generation ago. But at the same time, they find it harder to afford housing space. These two effects do not cancel each other out, but the greater weight of housing costs has offset some of the progress that has been elsewhere. This is an additional layer of information which is not contained in income or expenditure levels.

3.4 Consumption and access to consumer durables

The possession of durable consumer goods is another dimension of living standards. Apart from their value in use, durables can also act as an alternative vehicle of consumption smoothing, which is why some economic papers have treat the purchase of durables as an alternative form of saving (e.g. Bennett et al, 2001). The possession of a durable generates an imputed consumption stream, which contributes to a household's living standard even if this is not seen in income or expenditure figures. Durable ownership rates are not simply a function of the level of income or expenditure. They have additional, independent determinants which income and expenditure data do not detect, which is why they contribute additional layers of information. These determinants include changes in the structure of relative prices; but more generally, since ownership rates are an example of output-based measures, they can also capture unobservable and/or unquantifiable factors which affect living standards.

Information on durables ownership can be gathered from the LCFS and its predecessors. The data does not allow the computation of imputed income streams, because ownership is only recorded on a yes-or-no basis, without adjustments for the durables' quality or age. Table 3.3 shows ownership rates of four key items since 1970 for the population as a whole.[13] All four show upward trends, and taken together, they indicate how much living standards have changed over time.

Table 3.3: Percentage of households with access to selected consumer durables, whole population, UK, selected years

	Car	Central heating	Washing Machine	Telephone	Own home
1970	52%	30%	65%	35%	n/a
1980	60%	59%	79%	72%	57%
1990	67%	79%	86%	87%	67%
2000	72%	91%	91%	95%	71%
2010	75%	96%	96%	87%	66%

-gathered from ONS (2010), DCLG & ONS (2012)

For more recent years, data on durables ownership is also available for each income decile separately. As in the case of expenditure profiles, this enables a comparison of the situation of contemporary low-earners with the situation of average earners in the recent past. Table 3.4 shows access to the same goods as above, and to additional ones for which only recent data exists, in the lowest and the second lowest income decile. Figures for the top decile of the distribution have also been included, as a proxy for the highest realistically attainable rate (which will seldom be 100%).

Among households in the bottom income decile today, the proportion with access to central heating, washing machines and telephones is higher than it was for the population as a whole in 1980. Contemporary low-earners are, again, in this narrow sense 'better off' than average earners a generation ago. Ownership rates of mobile phones, microwaves, satellite receivers as well as CD and DVD players are also above 60% in the bottom decile, and access to bank accounts is near-universal. There are products to which less than half of those in the lowest deciles have access, but these tend to be the products which even a sizeable share of top-earners do not have (tumble dryers, dishwashers), or where a factor beyond income appears to play a role. For example, home contents insurance is tightly

[13]'Ownership', in this case, is used in the sense of 'access to', it does not have to mean proprietorship. If a rented flat contains a central heating and a washing machine, it is counted as well.

linked to housing situation: Just over a third of renters have one, while 92% of homeowners do.

If low-earners are better equipped with consumer durables than ever before, it also means that their ability of consumption smoothing has increased. Households are more likely to maintain a certain living standard during a period of low income, or even of low expenditure, if a 'fleet' of durables continues to provide a steady consumption stream.

The figures for homeownership deserve a special mention because this category is not comparable to the others. In a growing economy, one would naturally expect ownership rates of the other goods to increase, while there need not be an aggregate relationship between homeownership and income levels. The category has been included for two reasons. Firstly, homeownership is simply the most obvious means of consumption smoothing without the use of financial products, at least for those who have paid off their mortgages. Other things equal, homeowners are more resilient to income fluctuations than renters. Secondly, the previous subchapters have highlighted the adverse impacts of the increase in the relative price of housing, and the distinction by housing situation allows some further differentiation. During the 1980s, homeownership among low-to-middle income households increased substantially, largely as a result of council tenants buying their home under the Right to Buy (RtB) programme. The evaluation of the RtB's impact has remained highly controversial to this day (see King, 2010, and Forrest & Murie, 2009, for two views from opposite ends), but poverty researchers and poverty campaigners in the UK have overwhelmingly sided with the critics (e.g. CPAG, n.d.). However, one of the (accidental) consequences of the RtB was that many low-to-middle income earners became homeowners just before the increase in the relative price of housing began in earnest (more on which in Chapters 7-9). This means that the same RtB, on which many in the 'poverty community' take such a critical view, must have ameliorated the impact of rising housing costs on at least some low earners, a point which is not acknowledged by the RtB's critics.

Table 3.4: Percentage of households with access to selected consumer durables, 1st, 2nd and 10th decile by gross income, UK, 2009 or latest available year

	Bottom decile	2nd decile	Upper decile
Car	29%	44%	96%
Central heating	93%	94%	99%
Washing machine	85%	92%	100%
Telephone	74%	87%	98%
Mobile phone	61%	62%	88%
Microwave	86%	90%	92%
Tumble dryer	37%	45%	75%
CD Player	70%	73%	96%
DVD Player	66%	73%	98%
Satellite receiver	63%	73%	91%
Dish washer	11%	16%	77%
Home computer	33%	41%	98%
Internet connection	26%	33%	96%
Own home	32%	52%	94%
Bank account	95%		n/a
Home contents insurance	44%		89%*

-gathered from ONS (2010), New Policy Institute & Joseph Rowntree Foundation (n.d.)

*refers to the upper quintile, not decile

On the whole, the figures indicate rising living standards among low-earners, but a number of important items counter the trend. Car ownership in the lowest decile is still far less prevalent than in was among the population as a whole in 1970. Also, access to a computer and internet connection is practically universal in the top decile, while most households in the bottom deciles do not have them. Given the centrality of the social participation aspect in poverty measurement, these are not products like any other.

There are further qualifications to be kept in mind in order to avoid an overoptimistic interpretation of the figures. Firstly, no adjustments are made for differences in quality and intensity of use. For example, low-earners today are almost as likely to have a central heating in their home as top earners, but this does not mean that they can attain the same standard of heating. Secondly, as shown in subchapter 3.2, those in the bottom income decile are not always those with the lowest living standards. The inclusion of households whose permanent incomes are higher will surely result in some upward bias in the figures, even though for bounded figures, this is less of a problem than for the income figures themselves. Thirdly, the datasets only register whether a durable is there, not whether it has already been fully paid for. To the extent that outstanding consumer credit liabilities

remain, the consumption smoothing argument does not hold. Still, while they should not be overinterpreted, figures on durables represent a useful supplement.

These figures can be extended into a broader profile of low-earners' consumption, going beyond the possession of physical objects, by complementing them with the data underlying material deprivation scores. MD is a relatively new concept, which does not yet allow comparisons over time, but it allows a closer look at the living standards of present-day low-earners. Since MD data is available in an internationally harmonised format, it can also be used for cross-country comparisons.

Table 3.5 shows the proportion of households in the UK with access to a set of goods and services. The figures are obtained by simply subtracting the individual components of the MD score from 100%, to show access rather than non-access. MD surveys use the term 'access' in the sense of 'actual or potential access': Those who do not have an item, but who report that they could afford it, and are simply not interested in it, are treated as if they had it. MD figures are not limited to physical objects, and they correct, to a small extent, for the regularity/intensity of use ("every other day", "annual", "adequate"). They also contain some information on financial stress and vulnerability to income shocks. Figures for the UK are compared to those of three Scandinavian countries, which, because of their exceptionally low rates of relative poverty, are often presented as the 'gold standard' of poverty alleviation in the literature (more on this in Chapter 4).

Specified in those terms, access to many of these goods and services is nearly universal. The Scandinavian figures are, on the whole, a bit better than the British figures, but the difference is not very large. The exception is annual holidays and the ability to cover unexpected expenses, where the UK does lag noticeably behind Sweden and Denmark.

Table 3.5: Access to goods and services underlying the MD basket, % of population, four countries, 2008 or latest available year

	UK	Sweden	Denmark	Finland
TV	99.9%	99.6%	99.5%	99.2%
Telephone	99.8%	100%	100%	99.9%
Washing machine	99.5%	100%	98.0%	98.6%
Meals with meat, chicken or fish at least every other day	95.5%	96.8%	98.3%	97.4%
Keeping home adequately warm	95.3%	97.5%	90.7%	97.6%
Car	95.1%	96.0%	90.7%	91.6%
Paying bills without arrears	93.8%	92.4%	95.8%	90.4%
Annual holidays	77.0%	85.4%	90.5%	81.5%
Able to cover unexpected expenses	71.2%	86.4%	76.2%	69.9%

-based on data from Eurostat (2009)

3.5 Financial wealth

The last subchapter has shown relatively high rates of home ownership. Property wealth is therefore not uncommon among low-earners.

But property wealth is a very special type of wealth. It is a means of consumption smoothing, but not of expenditure smoothing, due to its non-divisibility. Property wealth can also be a misleading indicator as the property market is a volatile market. It is therefore worthwhile to consider financial wealth, i.e. savings and non-housing assets, as well.

Median net financial wealth in the UK has been a mere £1,100 in the mid-2000s (Crossley and O'Dea, 2010). 27% of all households have negative financial wealth, with debt levels exceeding the value of their savings and assets. This means that the majority of households could not draw on financial wealth for expenditure smoothing over an extended period.

Financial wealth correlates with income, but not very strongly, except in the top decile. There are net wealth owners and net debtors in every income decile, and the variation is greatest in the top half of the distribution. In the bottom half, there are not many households with substantial (>£20,000) wealth levels, and not many households with significant net debt levels either. Throughout the bottom half of the income distribution, the median level of financial wealth is positive but very modest, with values of up to £800 (ibid.).

The inclusion of data on financial wealth does not necessarily lead to a more pessimistic assessment of the living standards of the least well-off: Even though about a quarter of the population live in a household with negative financial wealth, most of them are in the upper half of the distribution. However, it does not result in a more optimistic assessment either. Most of those in the low income strata do not have net savings or financial assets they could draw upon on 'rainy days'. While the incomes of the lowest earners have increased over the long run, and the expenditure of the lowest spenders much more so, the same is not true for their wealth levels. The inclusion of data on financial wealth can therefore provide a necessary qualification, or a cautioning against an overoptimistic assessment of low-earners living standards.

3.6 Mixed measures

In subchapter 3.4, access to consumer durables in the bottom decile has been shown to be fairly widespread. But subchapter 3.2 has shown that those with the lowest incomes are not necessarily those with the lowest living standards. The latter are more likely to be located at the bottom of the expenditure distribution rather than the bottom of the income distribution. Therefore, Table 3.6 shows access to durables in the bottom decile of the expenditure distribution. The figures are indeed a bit lower than those in Table 3.4. Access to a central heating, for example, is widespread, but not universal. One in four, rather than one in three, own a computer. This is a good indication that the lowest spenders, not the lowest earners, are 'really' the least well-off.

Table 3.6: Percentage of households in the bottom decile of the expenditure distribution with access to selected consumer goods, UK, 2001-2009

	% with access
TV	98%
Central heating	89%
Washing machine	84%
DVD Player	42%
Own home	32%
PC	24%
Car	24%
Pay-TV	18%
Internet	15%
Two cars	2%
Private health insurance	2%

-gathered from Brewer and O'Dea (2012)

But the point remains that this describes, in a limited sense, a higher level of prosperity than that of average households as recently as in 1980.

3.7 Other measures

Life expectancy

So far, the term 'material living standards' has been interpreted in a deliberately narrow manner, strictly limited to material aspects. For the sake of completeness, it is necessary to include a few key health-related indicators. The determinants of life expectancy are a topic in their own right, and the question whether life expectancy in developed countries is still related to absolute levels of living standards remains a matter of controversy (see Deaton, 2001, and Wilkinson, 1992, for two diametrically opposed views). This subchapter will not touch upon these issues; it will limit itself to presenting a few selected figures.

Average life expectancy at birth in the UK was around 71 years in the early 1960s, 72 years in the early 1970s, 74 years in the early 1980s, 76 years in the early 1990s and 78 years in the early 2000s (World Bank, 2010). For England, contemporary data on life expectancy is also available separately by social 'class' (defined by occupation). In the early 2000s, among members of social Class V (unskilled manual occupations), life expectancy at birth was 78.7 years for women, and 73.5 years for men (White and Edgar, 2010). This was about two

years below the population average of the same period, and about equal to the population average of a decade earlier.

As with all the other measures of living standard, some qualifications have to be kept in mind in order to avoid an overoptimistic interpretation. Firstly, figures for unskilled labourers refer to England alone, where life expectancy is generally a bit higher than in the UK as a whole (ibid.). Secondly, the results appear less positive once they are adjusted for health status. This is shown by the indicator of 'healthy life expectancy' (HLE). HLE is by definition lower than life expectancy as such, but the difference is larger for the unskilled than for the population average.

Table 3.7: Life expectancy of unskilled manual labourers, in years, England, early 2000s

	Women	Men
Life expectancy at birth	78.7	73.5
Healthy life expectancy (HLE) at birth	68.6	64.2
Conditional life expectancy at age 65	19.1	13.9

-gathered from White and Edgar (2010)

On the whole, though, it remains true that the least well-off live longer and healthier lives than ever before, notably surpassing the average for the population as a whole of less than a generation ago. This is true even though the figures are specifically for unskilled workers, who, apart from being less prosperous in material terms, are also more likely to engage in physical labour.

Air travel

In assessing living standards, it is generally not sensible to single out individual products, because in isolation, the consumption of any one good or service reveals more about preferences than about affordability. But since air travel is an especially obvious example of a former luxury product that has become a mass market product, it arguably merits an exception. The airport surveys of the British Air Transport Association (2010) provide a breakdown of British non-business air travellers by socio-economic group, with categories D and E (just under 15m of the British population) lumped into one. Between 1999 and 2008, the number of outgoing passengers from this group increased from 5.8m to 7.1m, before plunging again when the recession made its full impact. The current number is still above the one from 1999.

This does *not* show the proportion in these socioeconomic groups who can or could afford air travel, because multiple fliers have not been filtered out. Neither is it possible to show access to air travel specifically among those with the very lowest living standards, as D/E is still a broad categorisation.

Table 3.8: Number of outgoing flights taken by UK residents in socioeconomic classes D and E, in millions, selected years

	No. of flights Classes D/E
1999	5.8m
2007	6.8m
2008	7.1m
2010	6.2m

-gathered from British Air Transport Association (2010)

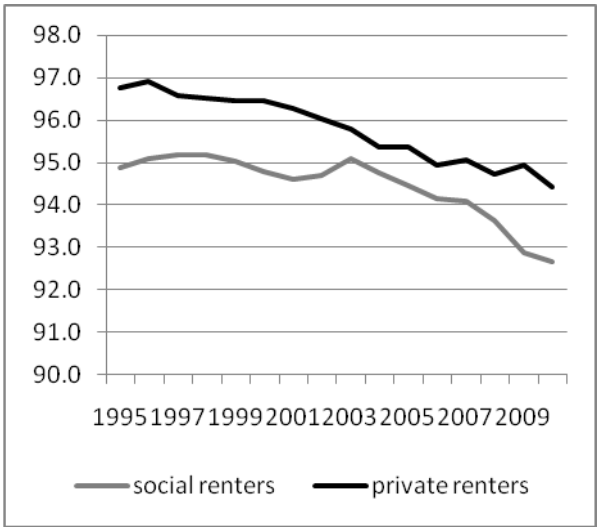
But what is safe to say is that before the crisis, air travel among this group has not been uncommon, and is likely to become more common again once the economy emerges from the present recession.

Housing conditions

Measures of housing conditions are also a direct way of assessing living standards, and the amount of living space available per person is an obvious candidate. The English Housing Survey (DCLG & ONS, 2012) contains a formula to determine the housing need of different household types, which is similar to the formula that determines entitlement to Housing Benefit. The basic idea is that a bedroom should never be shared among more than two household members, with some household members qualifying for a single bedroom. The Housing Survey then shows the proportion of households who meet this standard by housing type, and since almost all owner-occupiers meet the Bedroom Standard, it is sensible to concentrate on those in private or social rental accommodation.

It shows that the vast majority of renters meet the Bedroom Standard, but the time trend is unusual, peaking in the mid-1990s and then declining to the current level of about 94% among private and 93% among social renters. The downward trend predates the current recession, it cannot be blamed on households 'trading down'. It is a very partial indicator, and the magnitudes involved are not large, but it serves as a valuable reminder that not all measures of living standards show improvements. The more recent changes to the Housing Benefit formula and the 'bedroom tax' for social housing tenants can be expected to aggravate this trend.

Figure 3.8: % of renters meeting the Bedroom Standard, by tenure, England



-based on data from DCLG & ONS (2012)

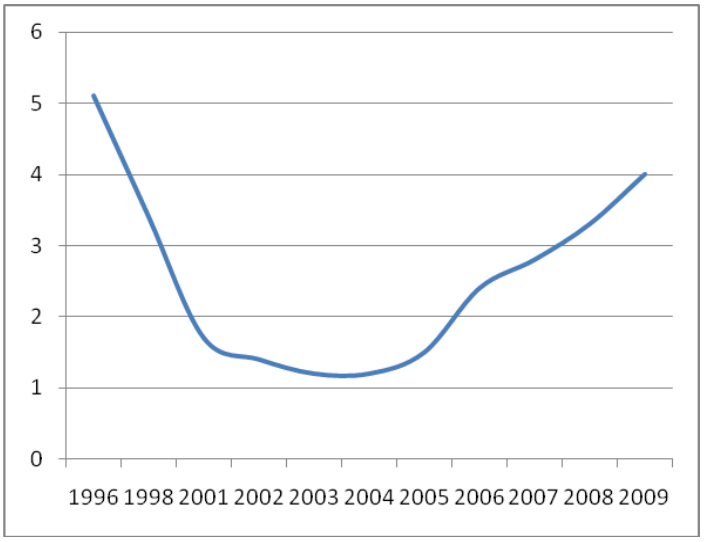
This measure picks up a recurring theme that has appeared several times in the above subchapters: The rising cost of housing appears to have had an especially strong negative impact on the living standards of low-earners.

Fuel poverty

Households are defined to be in fuel poverty when the cost of heating their home to a pre-defined standard would exceed 10% of their income, regardless of how much they actually do spend on fuel. The concept has many weaknesses, especially because it depends so critically on dwelling size. But this is a confounding measure which is unlikely to change suddenly, so even if the level of fuel poverty in any given year may not have a meaningful interpretation, its time trend still would.

Since the mid-1990s, fuel poverty has evolved in a U-shaped manner. It fell from 5.1m households in 1996 to 1.2m in 2004, and then increased to 4m again, with the turning point preceding the recession. The turning point was also the year in which fuel prices started to increase at a much faster rate than the overall Consumer Price Index (ibid).

Figure 3.9: Prevalence of fuel poverty in the UK, in m households



-gathered from DECC & ONS (2011)

This re-emphasises a point which has been made repeatedly throughout this chapter: Living standards, and the living standards of the least well-off in particular, do not just unequivocally 'rise' or 'fall'. They are determined by a variety of factors, among them changes in relative prices, which can move in opposite directions. Some important goods and services can become less (more) affordable despite generally rising (falling) incomes or expenditure.

3.8 Reckoning up: How to measure living standards?

The above indicators could be grouped into two categories. Income and expenditure at selected deciles or percentiles are overall measures, which represent 'the bottom line'. All the others are partial measures, which describe selected aspects of low-earners' living standards.[14] Almost by definition, this makes the indicators in the second category complements rather than substitutes. The same is not true for the first category. As overall measures, income and expenditure data have very similar purposes. When they move at very different paces, or even in opposite directions, this does not convey complementary but contradictory information. This does not mean that one of them should be completely abandoned and replaced by the other. But there is a case for assigning a clear priority

[14] The health-related measures are an outlier which cannot be categorised, at least as long as there is widespread disagreement over the extent to which they are actually related to material living standard.

status to one of them. The above-mentioned studies on expenditure rarely address this question. They contrast the impression that income data provide to the impression provided by expenditure data, and hypothesise about the potential explanations for divergences between the two. But they do not take explicit positions on which of the two impressions is the 'correct' one.

The position taken in this chapter is that expenditure, not income, should be the primary measure of living standards of the least well-off. But expenditure should be extended, as far as data availability permits, towards a measure of consumption. Good examples can be found in the studies by Meyer and Sullivan (2006) for US data, and, arguably a pioneer study, Brewer and O'Dea (2012) for UK data. Both start with simple measures of cash expenses, but then augment them by adding imputed consumption streams resulting from the ownership of a home (subtracting the acquisition costs, where appropriate). There are at least three reasons why measures of this kind should take primacy over income.

1. Income is poorly correlated to many other measures of living standards as well

Subchapter 3.2 has shown that the relationship between income and expenditure disappears at the lower end of the distribution, and even turns negative at the very bottom. This is not a property of the expenditure data, but of the income data. Brewer et al (2009) have repeated the same exercise for a whole bundle of measures of living standards. They have plotted income against indicators of material deprivation, housing standards, household assets, cash flow problems, possession of durables, and food budget shares. The basic results are always the same as for expenditure: There is a floor level below which income is no longer correlated with other measures of living standards, and towards the very bottom, these measures show living standards rising again. Most measures show a considerable spread in living standards at every given income level, but this spread is always especially large in the bottom income decile. It is a consistent finding across indicators that those with the lowest incomes are not generally those with the lowest living standards. Meanwhile, a comparison of Table 3.4 and Table 3.6 shows that the ownership rate of virtually every consumer durable is lower in the bottom expenditure decile than in the bottom income decile. This is a strong hint that when trying to identifying the least well-off tenth of the population, the expenditure distribution is a better guide than the income distribution.

2. Income and expenditure: The correlation holds in reverse

Expenditure data also shows an advantage over income data on a more basic level. Most of the above studies have plotted expenditure against the income distribution. This produces a 'hockey stick' shape, with a plateau and an upward tick at the very bottom. But the same does not hold in reverse. When income is plotted against the expenditure distribution, both the plateau and the upward tick disappear. The hockey stick shape only appears for expenditure given income, not for income given expenditure (see Brewer et al, 2006). Those on the lowest incomes do not necessarily display the lowest expenditure, but those with the lowest expenditure also display low incomes. Of course, variation remains: There are high earners, median earners and low earners at any point of the expenditure distribution, but the spread between them does not grow larger at the bottom – if anything, it narrows a bit. Down to the lowest expenditure percentile, there is an almost linear relationship between expenditure and the corresponding median income level. It is almost always true that those at the i^{th} percentile of the expenditure distribution have a lower average income than those at the $(i+1)^{th}$ percentile. But it is not necessarily true that those at the i^{th} percentile of the income distribution have a lower average expenditure than those at the $(i+1)^{th}$ percentile.

3. The limits of consumption smoothing and the role of benefit underreporting

Subchapter 3.2 has mentioned that deviations of temporary from permanent incomes, bridged by saving, dissaving and borrowing, are one explanation for the mismatch between income and expenditure data. Yet if consumption smoothing was the only explanation, the issue could still be addressed within an income-based framework. Income data could then simply be averaged over a longer period, to make it correspond more closely to permanent income. For US data, studies which use alternative accounting periods are already available (Wolff, 2009, pp. 121-122). Unsurprisingly, the result is that the longer the time horizon, the smaller the number of low-income households, because those experiencing transitory low-income spells are filtered out.

But there seems to be an additional factor at work. For UK data, Brewer et al (2009) have looked at the overlap of relative poverty and several other measures of low living standards, controlling for the duration of the relative poverty spell. When using annual

data, the relationship between relative poverty and other measures of low living standards is very low, which is unsurprising – it confirms what all the studies reviewed in Chapter 1 have shown. When those in short-term relative poverty are filtered out, the relationship becomes stronger – but not very much so. The likelihood of experiencing other forms of deprivation increases with the duration of relative poverty, but even after three years, the overlap remains weak. Some households experience some form of hardship even though their income always exceeds 60% of the median, while many others never experience hardship even though their income is always below this level. If income fluctuations and consumption smoothing alone could explain the lack of overlap between income and other measures of low living standards, then filtering out those with transitory low incomes should solve the problem. It does not. This is also reinforced by the findings presented in subchapter 3.5: Most households in the low income deciles do not have large savings or financial assets, they therefore could not engage in prolonged expenditure smoothing.

An additional explanation, mentioned as a possibility in several of the expenditure studies, is misreporting of income from government transfers. 'Misreporting' does not have to be deliberate. Some transfer instruments are simply administratively complex, and subject to frequent changes, which makes them easily mistakable. An estimate of the extent of misreporting is provided in the table below. 'Misreporting', in this case, is defined as the difference between the amount the government pays out per transfer instrument, and the amount households report to receive. The latter has been estimated by grossing up the figures from the official income survey, the Family Resources Survey (FRS). The amount the government pays out per transfer instrument has been gathered from the relevant departments, which are the Department for Work and Pensions and HM Revenue and Customs. If all households gave an accurate account of their transfer income from different sources, both methods would lead to the same result (apart from what can be explained by sampling errors).

As the table shows, for Child Benefit, contributory retirement pensions, and Council Tax Benefit, this is indeed the case. There is no noteworthy difference between the amount the government pays out and the amount households declare to receive. But for tax credits, housing benefit and the basic income replacement benefits, there is a huge gap between the two. Between a third and two thirds of the sums paid out on these transfers do not reappear in the income statistics. The table's last column shows the amount that is missing

in the income surveys, as a percentage of the total sum paid out. The findings are in line with earlier estimates of benefit underreporting (cf. Brewer et al, 2008).

The exact reasons why income transfers are underreported cannot be known, but the table shows two recognisable patterns. Firstly, the transfers which are more heavily underreported tend to be the more complex ones. It is probably not a coincidence that the gap between income surveys and administrative data is highest for tax credits, a complex instrument which differs from household to household, and lowest for Child Benefit, a relatively simple flat payment. Housing Benefit, meanwhile, is usually paid out directly to landlords, and does not directly reach recipients.

Complexity could explain why FRS respondents err, but not why they always seem to err in the same direction. Many of the major transfer instruments go underreported, but there is almost no indication of overreporting. It is not far-fetched to suspect that underreporting also has a reputational component. Horton and Gregory (2009) document survey evidence on the variation of public support for different types of welfare spending, and find a relatively stable pattern: Universal and contributory benefits generally enjoy a high level of public esteem, while means-tested benefits do not. They find that this is closely linked to public perceptions of the recipients, with negative attributes more often ascribed to recipients of targeted transfers. The only clear exception to this are disability-related benefits, which are targeted to a specific group, but which still enjoy high levels of public support.

There is no ‘proof’ that social stigma is the reason why some transfers are heavily underreported while others are not, but it is a conjecture which would broadly fit the pattern shown below. It is quite plausible that a combination of complexity and social stigma explain the underreporting of transfer income.

Table 3.9: The extent of transfer underreporting by instrument, in £bn and %, 2008

	Reported	Paid out	Missing
Working Tax Credit and Child Tax Credit	£9.2bn	£29.0bn	68%
Jobseekers' Allowance	£1.4 bn	£2.9 bn	52%
Income Support and Pension Credit	£10.9 bn	£16.4 bn	33%
Housing Benefit	£13.1 bn	£17.1 bn	23%
Disability Living Allowance	£8.5 bn	£10.5 bn	20%
Incapacity Benefit / Employment and Support Allowance	£5.9 bn	£6.6 bn	10%
Council Tax Benefit	£4.0 bn	£4.2 bn	5%
Basic State Pension, SERPS and S2P	£58.8 bn	£61.5 bn	4%
Child Benefit	£10.8bn	£11.0bn	2%

-author's calculation, based on data from DWP Statistics (2011), ONS (2010a) and HRMC&DWP (2010)

This underreporting, in turn, would go a long way towards explaining the gap between recorded income and expenditure. Transfer income may be underreported in the FRS, but it will still show up as expenditure reported in the LCFS.

To gain an appreciation of the magnitudes involved, transfer income has been corrected for underreporting in the table below. The second and the third column show market income, transfer income and direct taxes for the bottom decile and the second decile, as reported in the FRS. The fourth and the fifth column correct the transfer instruments for the missing amounts, as identified in Table 3.10. This is, of course, only a back-of-the-envelope calculation, which assumes that the extent of underreporting is uniformly distributed across all deciles. There is no reason why this should be the case, but there is no way of allocating underreporting to specific parts of the income distribution.

Since Table 3.10 is not an exhaustive list, this is a conservative estimate: It assumes that all other benefits have been correctly reported. Figures have been chosen for 2007, in order to avoid a recession year which could produce atypical results.

Table 3.10: Annual incomes of the 1st and 2nd income decile in the UK, reported and corrected for underreporting, in £, 2007

	As reported		After correcting for underreporting	
	1st decile	2nd decile	1st decile	2nd decile
Market income	£3,424	£5,879	£3,424	£5,879
Transfer Income	£5,394	£7,511	£7,855	£10,704
Taxes and National Insurance Contributions	-£1,029	-£1,375	-£1,029	-£1,375
Disposable Income	£7,791	£12,015	£10,210	£15,146

-author's calculation, based on data from DWP Statistics (2011), ONS (2010a) and HRMC&DWP (2010)

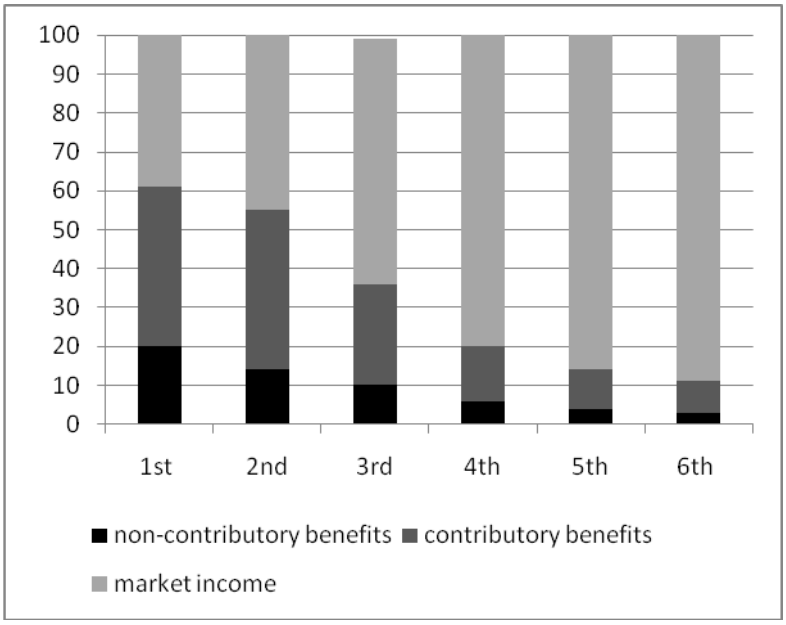
These adjustments raise disposable incomes by one third for the bottom decile, and one quarter for the second decile. This is, of course, a very broad aggregate, which lumps very different household types together. The pattern shown in Table 3.9 implies that the extent of underreporting differs a lot across household types, and this could systematically bias the perception of poverty risks. To give just one example: Some of the studies in Chapter 1 have shown that disability is a poverty risk factor if poverty is defined as material deprivation, but not when it is defined as relative income poverty. This may well be explained by underreporting: For disability-related benefits, there is much less underreporting than for other targeted benefits, presumably due to the absence of a social stigma. Both the disabled and the non-disabled underreport payments, but the latter substantially more so, biasing the *relative* risk analysis.

Underreporting could also explain why the mismatch between income and expenditure has grown over time. The composition of lower incomes has changed over time, with an increase in the share of transfer incomes and, more importantly, a shift from contributory to non-contributory transfers within this component. The three graphs below show the composition of gross incomes for the bottom six income deciles[15] in three different years, 1977, 1993 and 2007. (The years have been chosen because of their comparability in terms of the business cycle.) Incomes have been grouped into three categories, which are market income, contributory benefits and non-contributory benefits. They have not been corrected for underreporting, so the figures themselves are definitely inaccurate, but the emphasis here is purely on the time trend.

In 1977, it is only in the bottom third of the distribution that transfer income accounts for a sizeable share of gross income, and within this category, contributory payments represent the largest share.

[15] The upper four deciles have been excluded because they do not show much variation over time, and thus add little information.

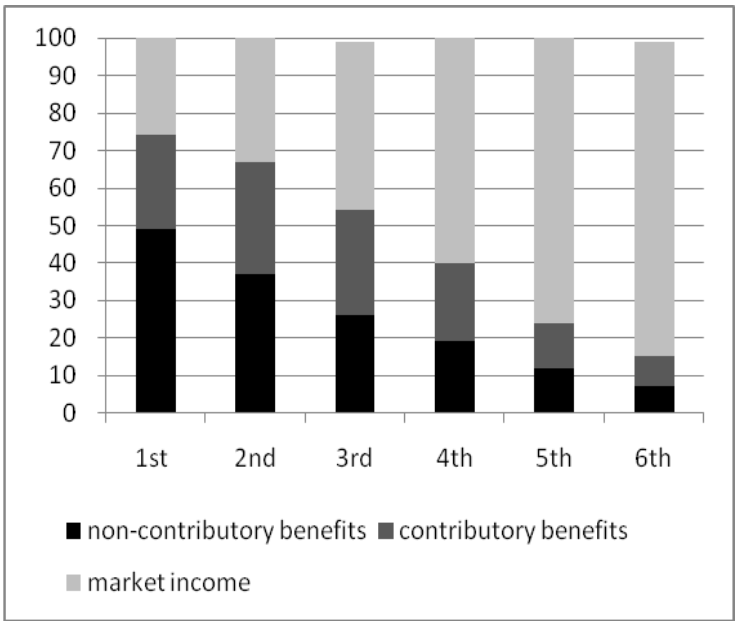
Figure 3.10: The composition of gross incomes by decile, % of total, UK, 1977



-based on data from ONS (2010a)

By 1993, this had changed considerably. Transfer income is now an important income source for the bottom half of the distribution, and the composition has shifted away from contributory towards non-contributory transfers.

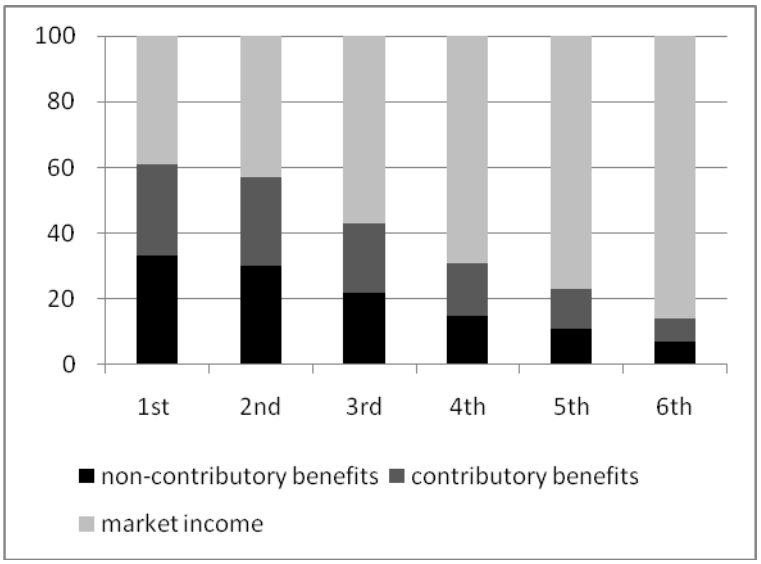
Figure 3.11The composition of gross incomes by decile, in % of total, 1993



-based on data from ONS (2010a)

The figures for 2007 show a re-moderation of these developments, but not a reversal. Especially the shift from contributory to non-contributory transfers has been a significant and lasting change.

Figure 3.12 The composition of gross incomes by deciles, in % of total, 2007



-based on data from ONS (2010a)

Non-contributory transfers, as Table 3.9 has shown, are particularly prone to underreporting. The transfer system has also become much more complex over time. In the late 1970s, retirement pensions, income support and child benefit alone accounted for more than two thirds of all reported transfer income (author's calculation, based on data from ONS, 2010a). Table 3.9 also suggests that greater complexity is associated with more underreporting. Thus, since the 1980s, there has been a strong shift from relatively simple and/or contributory transfers to more complex and/or means-tested ones. Both factors reinforce each other, as both can be expected to increase underreporting. Transfer income has also become a more important income source for more households.

These developments could go a long way towards explaining why income and expenditure data have increasingly diverged since the 1980s. This is not a particularly controversial hypothesis. The fact that income and expenditure have diverged is confirmed throughout the relevant literature (see subchapter 3.2), the fact that some means-tested benefits carry a social stigma is also well-documented (see Horton and Gregory, 2009), and so is the fact that underreporting explains much of the gap between income and expenditure. The only novel claim made here is that there is a causal relationship: that stigma and complexity

drive underreporting, and that a shift towards more complex and socially less well-accepted transfers therefore weakens the correlation between income and spending. Combined with increased income volatility, this provides a case for approximating living standards through expenditure rather than income data.

There is also a possibility of non-random non-responses: It could be that those who receive the highest transfer amounts are least likely to respond at all in the income surveys. But this would not necessarily affect the claim made above, because the mechanism could still be the same: Social stigma could still be the reason why those who receive the largest sums decline to answer altogether. The above claim does not depend on any particular 'distribution' of underreporting, and this distribution could well be non-linear. To say that e.g. Housing Benefit carries a social stigma, which leads to underreporting, does not mean that all recipients underreport their Housing Benefit income to the same extent. It could be that those who receive moderate sums report them accurately, while those who receive the largest sums do not report them at all.

In any case, even if the explanation turned out to be wrong, it would still remain the case that expenditure is better able to capture underreported transfer income than income data. This observation does not depend on the reason for underreporting.

Counterarguments and limitations

In contemporary Britain, expenditure data provide a better guide to low-earners living standards than income – on balance. Expenditure data are not unequivocally superior. Some of the weaknesses of income data that have been identified above affect expenditure data as well, albeit in other ways, and to a lesser extent.

FRS-respondents underreport income from transfers that are complex and/or subject to negative perceptions. But something very similar occurs in the LCFS for expenditure on socially stigmatised or complex products. The extent of this can be shown by comparing households' self-reported consumption to national accounts data on recorded purchases – or in other words, by contrasting what people report to buy to what is actually being bought and sold (see Blow et al, 2004; Attanasio et al, 2006; Brewer & O'Dea, 2012). For most products like food and fuel, the two methods produce very similar results. But for alcohol and tobacco, expenditure surveys are completely inadequate, capturing less than half of the recorded sales volume. Something similar happens for many services, as well as more complex purchases, e.g. financial and insurance products. The overall accuracy has

been very high until about the mid-1990s, with aggregate reported purchases capturing more than 85% of aggregate recorded purchases. This rate has dropped considerably since then, presumably mostly due to falling response rates. If the downward trend in accuracy continues, it could eventually undermine the case presented here for preferring expenditure over income data.

Up until now, however, living standards of the least well-off are best measured by expenditure data. Especially for basic essentials, expenditure surveys still show high levels of accuracy, which makes them suitable for poverty research. This result is, however, very specific to contemporary Britain. Zaidi and de Vos (2001) compare income and consumption poverty in various EU countries, and find that in many of them, the choice between these two variables makes much less of a difference.

In short: Expenditure data show, on the whole, greater improvements in the living standards of the least well-off than income data, and in all likelihood, the more favourable impression is also the more accurate one.

3.9 Conclusion

Taking a step back, the impression obtained by combining these different mosaic pieces is that the living standards of the least well-off have substantially and continuously improved over the last decades. Their real incomes are higher, their real expenditure is even more so, and their access to durable consumer goods is a lot greater. The share of their budgets which has to be reserved for basic necessities has declined, and the share available for convenience and comfort has increased. Income data for the very lowest percentile do not show much improvement, but this is almost certainly due to idiosyncrasies of the income data. At the lower end of the distribution, income has become an increasingly poor guide to living standards, mostly due to consumption smoothing and underreporting of transfer income.

But it is equally important to notice that the results are not unambiguously positive; it is a picture with lots of blemishes. Above all, all measures that account for the increased cost of housing show much less improvement than partial measures which ignore housing, or overall measures which 'drown' this effect by improvements made elsewhere. Further, while it is true that low-earners reserve a much smaller share their budgets for food than

average earners as recently as in the 1980s, the same was already true a decade earlier. No improvements have been made since then, and there may even have been a change for the worse. Low earners' also find it harder to attain a given standard of heating than a decade earlier.

On the whole, this produces a multi-faceted picture, with improvements in some, stagnation in others and changes for the worse in yet other respects. No poverty measure could fully grasp all these layers, and it would be unrealistic to expect any single measure to do so. But what has to be reiterated is that none of the poverty measures discussed so far comes even close, neither singly or in combination. Whether separately or combined, neither rates of relative poverty nor rates of (quasi-)absolute poverty reveal much about anything that this chapter has shown. It is true that this is not necessarily their purpose. Relative poverty measures, for example, were not designed to show whether low-earners can afford to dine in restaurants, to go on a foreign holiday, or to buy a computer. But even if incorrectly, poverty figures *are* widely interpreted to be measures of material living standards (see subchapter 2.4). It may not be their purpose to measure living standards, but it *should* be their purpose, because that is how they will be interpreted anyway.

It therefore poses a problem when poverty figures are entirely disconnected from low-earners living standards. The previous chapter has explained the emergence of a widely accepted 'poverty narrative' of British post-war history: Low and slightly falling poverty rates in the immediate post-war decades, a sudden explosion of poverty in the second half of the 1980s, followed by a stabilisation in the early 1990s, and then a moderation from the late 1990s on. It has been argued that this narrative has been conditional on the prior rediscovery of poverty, with the abandonment of the BSA method and its replacement by a relative measure. The important particularity of this rediscovery of poverty was that the statistical indicator behind the term 'poverty' had been replaced, but the connotations attached to it had not, or at least not among the wider public or even poverty campaign groups. With the new measurement, poverty was no longer meant to denote physical deprivation – but it was, and still is, widely interpreted to denote just that, or more precisely, a milder version thereof. 'Relative' is misinterpreted to mean 'less severe', in the sense of 'poor, but not desperately poor'. But despite these misunderstandings, relative poverty figures affect the poverty debate. When asked about the current prevalence of child poverty, the vast majority of BSA respondents either name a figure close to the actual one, or a much higher one. It has been claimed in the previous chapter that the current

post-war poverty narrative could not have emerged without the prior ascent of relative poverty. This claim has now been substantiated. While some aspects of living standards show stagnation of deterioration, on the whole, living standards of the least well-off have improved steadily.

This chapter has been about living standards, not about poverty per se. Nevertheless, in one sense, this chapter has already prepared the ground for the new poverty measure which will be developed later in Chapters 6 and 7: A sensible poverty measure should be able to capture much of the underlying information on low-earners living standards. It should automatically summarise much of what this chapter has explained. No single poverty measure could capture all of this, but current measures capture next to none. There must be room for improvement.

But providing information on low-earners living standards is not the only function of a poverty measure. An altogether different function of poverty measures is to produce adequate policy signals, and it is not clear whether the inability of a measure to fulfil the former function impedes its ability to fulfil the latter. They could still supply sensible policy signals at the macro level, even if they do not contain much micro-level information on low-earners living standards.

The next chapter will address this question, by studying the macroeconomic policy implications produced by different poverty measures.

4. Macroeconomic policy implications of different poverty definitions

Chapter 1 has shown that poverty studies which apply different poverty measures to the same population generally come up with very different results. This goes well beyond merely producing different poverty rates. Above all, different poverty measures show different time trends, and identify different risk groups and risk factors. They also differ at the macro level: When identifying periods of falling or rising poverty, the choice of the measure is often decisive. What one indicator identifies as a period of falling poverty can appear as a period of rising poverty according to a different indicator.

Chapter 2 has then shown how different poverty measures have produced different poverty narratives at different times in British history. In the 1950s and 1960s, the generally accepted view in the UK was that domestic poverty had largely disappeared. This interpretation, though, was intricately linked to the way poverty was understood and measured until then. Had poverty been measured differently, this interpretation would, most likely, not have arisen. What had nearly disappeared was a specific kind of poverty, namely, one which was still closely linked to physical deprivation, even if it had become a bit more encompassing than that over time.

By the 1990s, an entirely different poverty narrative had replaced the old one. By then, it had become a widespread view that poverty had returned on a large scale. Time series from regular surveys like the British Social Attitudes Survey show that this was not just a momentary impression, but a lasting change in perceptions. Just as the ending-of-poverty narrative of the 1950s and 1960s was a specific product of the BSA method that was in use until then, the rebound-of-poverty narrative was a specific product of the change in poverty measurement which had occurred in the meantime. More precisely, it was the result of a blend: the blend of the new measurement with the old understanding, which was still widespread. The statistical measurement of poverty had changed, but the connotations commonly ascribed to the term had not. Thus, outside of poverty research, ‘relative’ was interpreted to mean ‘less severe’, not ‘relative to a reference group’.

Chapter 3 has shown just how much the current poverty narrative depends on a relative, income-based indicator. While poverty rates rose, living standards of the least well-off kept

improving, according to a wide variety of measures. Specific aspects of low-earners' living standards showed stagnation or even deteriorations, as 'living standards' is a multifaceted concept, where improvements in some respects can coexist with a worsening in others. But a different poverty measure could not have produced the figures which gave rise to the rebound-of-poverty narrative.

Poverty measurement is not an end in itself; its ultimate objective is to derive adequate policy recommendations, including at the macroeconomic level. If different poverty measures produce different results, this raises the question whether they also lead to systematically different macroeconomic policy implications. More precisely, the question of this chapter is *not* whether they *can* produce different policy implications – it is obvious that they can, because it follows from the way different poverty measures are mathematically constructed. Due to their very design, relative measures show changes in the shape of the income distribution (or rather, the lower half), while absolute measures show changes in the real income of those at the bottom of that distribution. Thus, by definition, a factor that affects the income distribution (in the lower half) is also a determinant of relative poverty, and a factor that affects the bottom level is also a determinant of absolute poverty. If a factor raised the income levels of low-earners, while raising median incomes even more, it would decrease absolute and increase relative poverty. This is self-evident; it simply follows from the mathematical definition of these indicators.

But the question that remains is whether these statistical properties have any practical relevance. To use a simple example: Critics of relative measures have long pointed out that in a society with widespread destitution, but very little inequality, there would be no relative poverty. This is mathematically correct– but it is of little relevance when looking at real-world data. There are no countries which fit this description. The world's highest Gini-coefficients can be found in Africa and the poorer parts of Latin America (see World Bank, 2011). Apparently, some of the same factors that hinder development in these countries are also prone to producing large income gaps. At the same time, the Scandinavian countries show low levels of poverty according to almost any definition (cf. chapter 1). So how frequent are situations in which policymakers, explicitly or implicitly, really have to strike a balance between considerations of equity and economic efficiency in macroeconomic decisions? Are such trade-offs the rule, or are they the exception?

This chapter will review poverty studies which aim to identify the macroeconomic determinants of poverty, and to deduce policy implications. These are distinct from the studies reviewed in Chapter 1, where the main objective was to explore whether different poverty populations overlap, rather than what determines their size. The studies reviewed in this chapter also differ from the ones reviewed in Chapter 1 insofar as they normally concentrate on one single measure of poverty. An additional measure may sometimes be used for illustrative purposes, but it will normally have 'observer status' only. The policy recommendations are typically based on the results produced by one indicator, not both.

Most studies of this type concentrate on relative poverty, and a few look at some absolute measure of living standards at the bottom of the distribution. The conventional format of these models is to use the poverty rate, or the change therein, as the dependent variable, and to express it as a function of various macroeconomic variables.

The aim of this chapter is not simply to review the literature on the determinants of poverty. More importantly, after the review, the chapter will proceed to a critique, because especially the literature on relative poverty is seriously incomplete. Studies on the determinants of relative poverty draw far-reaching conclusions from models based on limited country samples and using few control variables. They largely fail to check their outcomes against the wider state of macroeconomic research. This chapter is an attempt to bridge this gap, by fusing two strands of literature – the literature on the determinants of relative poverty, and the wider literature on the determinants of macroeconomic performance. It will not stop here either, but go on to present a few hypotheses on a region which occupies a special place in the poverty literature: Scandinavia.

4.1 Determinants of absolute poverty (and material deprivation)

Harberger (1998) reviews the economic literature on the determinants of absolute living standards at the lower end of the distribution, covering a broad set of countries at different stages of economic development. He finds no evidence for the notion that living standards at the bottom had their own set of determinants, distinct from the determinants of overall economic performance:

"*[N]othing in our experience suggests that the real level of welfare of, say, the bottom quintile of a society does not improve as economic growth takes place*" (ibid p. 203).

Harberger's position is not simply that 'a rising tide lifts all the boats'. He does point out that there are a lot of policy areas where the situation of the poorest could be simultaneously improved in both absolute and relative terms. He cites examples like monetary instability as factors that damage economic performance in general, but which affect the poorest disproportionately. In such areas, policies that boost a country's economic potential can also promote greater equity. But the author also emphasises that the use of the tax and benefit system for redistributive purposes is not one of those policy areas:

"*A government that tried, for example, to squeeze a societies' income distribution to the point where the richest had no more than five times the per capita command over resources of the poorest would end up dooming its economy to stagnation, if not extinction. On that definition of equity, there is enormous conflict between equity and growth. For the efficient operation of an economy, its resources should be, in the main, allocated so as to maximize their contribution to meeting economic demand. This will lead to different types of labor having different rewards, depending on the capacities with which they are endowed, and the demand for those capacities"* (ibid., p. 204).

Harberger emphasises the role of wages and prices as signals of relative scarcity, which coordinate economic activity. When interfered with, they can no longer transmit the 'correct' signals, and their ability to steer resources to their most productive use is impeded. Thus, Harberger strongly rejects the implicit assumption behind many poverty studies, which view the production process and the income distribution as independent from each other. He emphasises that the latter is a result of the former, and cannot be interfered with without negative repercussions on it:

"It does not make sense to think of the income distribution of a country as something the government can determine. Nor [...] should it be viewed as something for which the government should be held responsible" (ibid., p. 236).

Harberger advocates a few targeted interventions aimed at supporting poor people, especially with regard to access to healthcare and education, but otherwise cautions against attempts to alter the income distribution. In Harberger's account, the tax and

benefit system is not a tool that can be used 'for free'. Its use always comes at a cost, which is why it should be used cautiously and sparingly.

For Harberger, the tax and benefit system is only a supplementary tool for poverty reduction. His main emphasis lies elsewhere. In his framework, there is no distinction between anti-poverty policies and growth-promoting policies. His policy recommendations to fight poverty largely coincide with his policy recommendations to promote overall economic growth. He emphasises the importance of monetary stability, fiscal prudence, openness to international trade, the minimisation of tax distortions, and the eschewal of micro-interventions like price controls and quotas. These are the kinds of basic economic policy fundamentals which almost all schools of economic thought, whether neo-classical, Keynesian, Austrian or otherwise, would generally agree on. So in this framework, 'anti-poverty policy' and 'good economic policy' are virtually synonyms. Also, there is no principal distinction between developing, emerging and highly developed economies.

Dollar and Kraay (2001) also discuss the literature on the relationship between general economic progress and income gains for the least well-off, and show that it produces mixed findings, but they argue that the prior literature is incomplete. These studies have generally expressed the incomes of the poor as a function of economic growth and a set of control variables, but they limited themselves to simple ordinary least squares (OLS) estimations, without paying much attention to issues of endogeneity. Omitted variables, for example, could lead to a correlation between the incomes of the poor and the error term. Dollar and Kraay therefore add an empirical study of their own, covering 92 countries during the period from 1950 to 1999. They use instrumental variables (IVs) to account for endogeneity problems. The authors find that on average, low-earners benefit at least proportionately from overall economic progress, even if not everywhere and at all times. Hence the study's straightforward title *"Growth is good for the poor"* (ibid p. 20).

So unsurprisingly, as in the case of Harberger, there is very little difference between the authors' anti-poverty policies and their general economic policies. The main reform areas they identify are institutional reforms to strengthen the rule of law, monetary stability, moderation of government spending, the removal of trade barriers, and the development of a robust financial sector. All of these are, again, measures which most schools of economic thought would consider sensible economic policy principles.

Finally, Clark et al (2006) use a theoretical model of endogenous growth, in which the incomes of the bottom quintile are determined by both income transfers and the overall rate of economic growth. Transfers are funded from taxation, which, in this model, reduces the growth rate, so transfers have an ambiguous effect on the poorest quintile. The authors conclude:

"[B]y reducing the economic growth rate, [redistribution] *reduces the welfare of all income groups over time. The relevant time horizon for lower income classes actually receiving transfers to be made worse off ranges from about 21 years to over 80 years"* (ibid., p. 55).

4.2 Determinants of relative poverty

Most studies of the determinants of poverty have concentrated on relative measures. Scruggs and Allan (2006) develop a model which expresses relative poverty rates as a function of GDP per capita, its growth rate, government spending as a proportion of GDP, an index measuring the generosity of selected welfare programmes, the share of the labour force which is covered by trade union agreements, the cumulative share of parliamentary seats held by parties with a 'left-wing' political orientation, and a set of control variables. The welfare generosity index is a composite measure which contains information on features like wage replacement rates, coverage and duration of entitlement. Their dataset comprises 17 Western European and North American nations, covering the period from the mid-1980s to the late 1990s. Coefficients are estimated through the OLS method, so arguably, the issue of endogeneity is insufficiently addressed. In this model, contrary to the studies reviewed above, neither current nor past economic growth is a determinant of poverty:

"What about income and growth effects on poverty rates? Is there any statistical evidence that growth rates reduce poverty controlling for other factors (such as benefit generosity)? In all our results, estimates for growth rates are not statistically significant" (ibid. p. 900).

When the welfare generosity variable is not included, the party-political composition of parliament, unionisation rates and total government spending have a substantial impact on poverty. But once the welfare variable enters the model, it absorbs most of the effect, becoming the most important determinant of poverty. On the whole, the authors conclude:

"[O]ur results are broadly consistent with previous research that points to a relationship between welfare states, left institutions, and poverty reduction", and in particular, "*generous welfare benefits play some nontrivial role in reducing poverty*" (ibid p. 901).

Scruggs and Allan also specify a similar model in which the dependant variable is an absolute, rather than a relative poverty rate, but arguably, this model only has 'observer status', in the sense described above. It broadly repeats the same findings as for relative poverty, but it adds little to the study because it is specified in such a way that the results could barely be otherwise. The reason is that it uses the poverty rate for market incomes, i.e. before taxes and transfers, as an independent variable. Once this variable is treated as exogenously given, redistributive spending must necessarily reduce absolute poverty, unless the government redistributed from the low-income to the high-income strata. So what this model does not test is whether redistribution itself increases pre-tax/pre-transfer poverty in the long run, by causing adverse economic side effects.

A similar model by Kenworthy (1999) expresses relative poverty rates as a function of government redistribution, real GDP levels of 1960, and the poverty rate of pre-tax/pre-transfer income. By controlling for an initial level of GDP, growth effects are indirectly captured. Redistribution is approximated in three different ways, one of which is social expenditure as a percentage of GDP, and the other two are composite indices measuring the income that people can obtain without participating in the labour market. His sample covers 15 Western European and North American countries, during the period from 1960 to 1991. Coefficients are estimated through the OLS method with no further adjustments, so again, arguably, endogeneity issues are improperly addressed.

In his model, the level and growth of GDP is not a determinant of poverty:

"The coefficients for the 1960 GDP per capita variable have the expected negative sign but do not reach conventional levels of statistical significance in any of the three equations" (ibid. p. 1129).

Instead, it is the three measures of redistribution which drive cross-country differences in poverty rates. Kenworthy also includes an 'observer status' model in which absolute poverty takes the role of the dependent variable. But again, since poverty at market incomes is controlled for, the model design already precipitates the result:

"Pretax/pretransfer poverty is the most important determinant of posttax/posttransfer poverty" (ibid. p. 1129).

The model by De Fina and Thanawala (2004) explores the combined effect of taxes and transfers on relative poverty, controlling for poverty at market rates and a number of economic control variables. Their data cover 17 Western European and North American countries, and the period between the mid-1980s and the late 1990s. The authors find that *"the estimates consistently indicate that government transfers and taxes policy reduce poverty"* (p. 336).

Brady (2003a) specifies a comprehensive model in which relative poverty rates are expressed as a function of economic, demographic and political variables. The most important ones are GDP growth, a measure of economic productivity, the unemployment rate, the rate of economic inactivity, union density, public social expenditure as a proportion of GDP, the share of children in single-parent households, and several variables capturing the relative strength of political parties with a 'left-wing' orientation. The model covers data from 16 Western European and North American countries for the period from 1967 to 1997. Brady finds that economic growth is not an important determinant of poverty, in line with the findings of Kenworthy as well as Scruggs and Allan. But Brady's results go further because in his model, it is not just GDP growth which fails to affect poverty:

"*[N]one of the economic and demographic variables consistently affect state-mediated*[16] *poverty*" (ibid p. 571).

In Brady's model, social expenditure is the key determinant of poverty, and social expenditure is, in turn, driven by the political variables:

"*[L]eft political institutions trigger an expansion of the welfare state. As past research also demonstrates, this welfare-state expansion reduces state-mediated poverty*" (ibid p. 577).

Moller et al (2003) construct a similar, but more comprehensive model of this type. The relative poverty rate is, again, expressed as a function of a set of economic, demographic and political variables. The most important ones are GDP per capita, the unemployment rate, the number of trade union members as a proportion of the total labour force, social

[16]'State-mediated' means after taxes and transfers. It is the poverty rate at disposable rather than market incomes.

expenditure as a proportion of GDP, government revenue as proportion of GDP, several variables capturing the generosity of individual welfare programmes, and a whole set of variables capturing the relative strength of political parties with a 'left-wing' orientation. This includes an indicator which awards points for every year a 'left-wing' party is in government, with a lower score if its power is shared with a non-left coalition partner. There are three model specifications. The first one is a standard OLS estimation, but the other two go beyond and seek to address endogeneity problems more carefully. The authors' findings are similar to Brady's:

"*When states spend more of their financial resources on citizen welfare, poverty is reduced. When they spend it under the influence of left-wing parties, they spend it in a more redistributive way and are particularly effective at reducing poverty*" (ibid p.44).

Lohmann (2009) looks at relative in-work poverty, using data from EU member countries in 2003 and 2004. The poverty rate is modelled as a function of a broad set of demographic variables, labour market characteristics, and the level of various transfer benefits. It turns out that not many of the economic and demographic variables are significant. Pre-transfer poverty among this group is mostly determined by the extent of centralised collective wage bargaining, while for conventional poverty rates, *"the extent of poverty reduction is higher in countries with higher replacement rates and more generous family benefits"* (ibid. p. 498).

What the above studies have in common is that welfare state redistribution comes out as the main determinant of cross-country differences in poverty rates. By emphasising the centrality of income transfers, they reaffirm what earlier studies in this field had already found (see Mitchel, 1991; Förster, 1993; Korpi & Palme, 1998; Kim, 2000).

It would be wrong to conclude that all studies on the determinants of relative poverty reach the same results, or provide the same policy recommendations. There clearly is diversity in these studies: Some emphasise the size of the welfare budget, while others place greater weight on how these programmes are structured, i.e. how accessible and redistributive they are. Some draw attention to the party-political balance of power, but the more common approach is to concentrate on institutional characteristics of different welfare regimes that are largely independent of party politics. These studies distinguish between more broadly defined models of welfare provision, a common distinction being between social democratic, liberal and Christian democratic (or alternatively Nordic, Anglo-

Saxon, and Continental European) welfare states (e.g. Esping-Andersen, 1990). Some studies treat the tax and benefit system as one large block, while others focus on the role of particular transfer programmes within it. Some see redistribution as almost the sole determinant of poverty rates, while others find that labour market institutions also have a role to play. But they agree on the centrality of redistributive government spending.

Studies by international organisations into the determinants of poverty rates reach similar conclusions. A study by UNICEF (2005) on relative child poverty argues:

"[A]ll OECD governments make significant interventions to reduce the levels of poverty that would theoretically result from market forces being left to themselves. For the most part, this intervention takes the form of cash or other benefits to the unemployed or the low-paid. On average, the result is a more than 40 per cent reduction of 'market poverty rates'. [...] [T]he greater the proportion of GDP devoted to these purposes the lower the risk of growing up in poverty" (pp. 20-23).

This finding is reconfirmed in follow-up studies (UNICEF, 2007 & UNICEF, 2012). All UNICEF studies also include a measure of material deprivation, but material deprivation has only 'observer status', as its determinants are not explored.

In study on poverty in the EU member countries, Eurostat (2000) argues:

"Social benefits reduce the percentage of "poor" people in all the Member States, but to very disparate degrees. The reduction is smallest [...] in Greece, Italy and Portugal. In all other Member States it is well over 25%; in Denmark it is around two-thirds, almost double the EU average. Denmark also has the lowest "poverty rate" after payment of benefits" (ibid., p. 6).

Finally, there are econometric models similar to the ones reviewed above, except that the dependent variable is not the relative poverty rate as such but a close equivalent (i.e. inequality). The results of these models are very similar to the ones discussed above. Bradley et al (2003) find:

"[T]he best estimate of the determinants of reduction in inequality [...] yield our most important and striking finding: leftist government very strongly drives the redistributive

process directly by shaping the distributive contours of taxes and transfers and indirectly by increasing the proportion of GDP devoted to taxes and transfers" (pp. 225-227).

Similarly, Allan and Scruggs (2004) find:

"Just as government by the left tended to lead to more rapid expansion of the welfare state, particularly the expansion of rights to reasonable income outside of the market nexus, government by parties of the neo-liberal right since the 1980s (or even since the mid-1970s) has tended to result in greater retrenchment" (p. 509).

4.3 The trade-off: Taxation and growth

It is clear from their statistical definitions that changes in relative and absolute poverty show different things, and can therefore respond differently to the same policy. But what the two subchapters above have shown is that this is much more than just a mathematical truism. It is relevant in practice because depending on whether they measure poverty (or living standards) in an absolute or in a relative sense, poverty studies really do identify different determinants, and provide different policy implications. Studies based on absolute measures suggest that there is no principal difference between anti-poverty policies, and policies to boost general economic prosperousness. Studies based on relative measures suggest that poverty reduction requires an entirely separate set of policies. Poverty is now seen as primarily determined by the extent of government redistribution, while general economic performance is not seen as especially relevant. But this still leaves the question of whether these implications merely *different*, or whether they actively contradict each other.

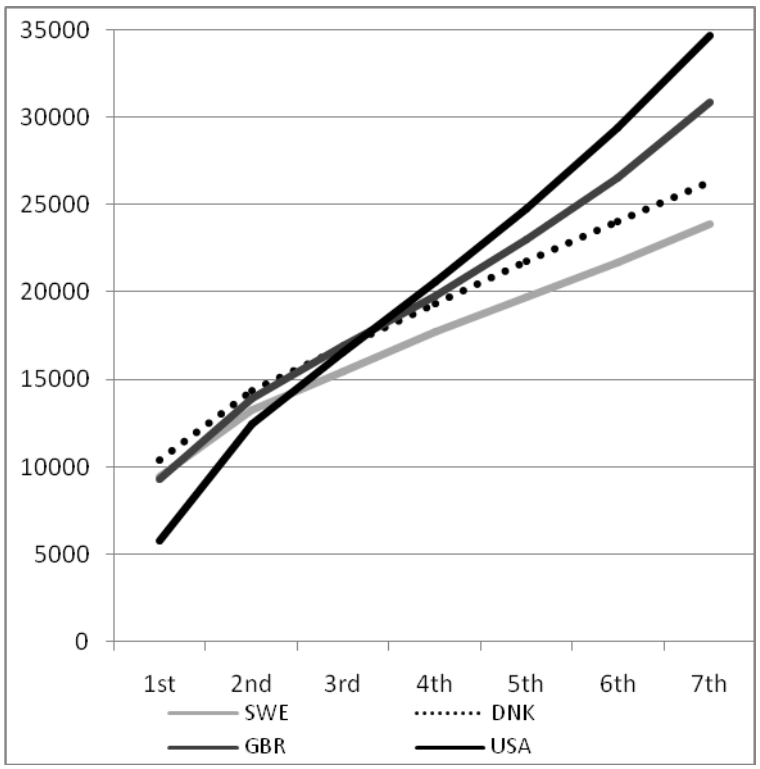
As shown in subchapter 4.1, Harberger (1998), Clark et al (2006), and to a lesser extent Dollar and Kraay (2001) concede the possibility that the policies they advocates may lead to a more uneven income distribution. But they regard this as inevitable if economic scarcity signals are to fulfil their coordinating function without impediments. Thus, in the case of the studies discussed in subchapter 4.1, it is clear that their recommendations presuppose a prioritisation of low-earners absolute purchasing power over distributive concerns. The authors of these studies do not claim that their recommendations could also inform a policy agenda built on a relative understanding of poverty. The claim made in these studies

is a more modest one, in the sense that there is an implicit recognition that the policy recommendations are only appropriate for tackling one type of poverty. Supporters of a relative concept will not find these recommendations sufficient, and they will find some of them actively counterproductive, but there is at least clarity about what this agenda can and what it cannot achieve. There is still much in these studies that can be critiqued, and will be critiqued later on in this thesis, but these studies are more open about their own limitations.

The same is not true for the studies discussed in subchapter 4.2. Most of them are not explicit about the fact that their recommendations presuppose a relative understanding of poverty, and may not be suitable for a policy agenda that aims to raise low-earners' purchasing power in a more absolute sense. The exceptions are the studies by Kenworthy (1999) and Scruggs and Allen (2006), which address this concern. They argue that while their recommendations are primarily relevant for relative poverty, they are also appropriate for raising low-earners' absolute incomes. They concede that redistributive measures may have growth-damaging effects, but argue that their magnitude is likely to be small, and certainly not substantial enough to outweigh the gains to the least well-off.

Looking at the country samples covered by these studies, it is not difficult to see how the authors have reached this judgement. Almost all studies on the determinants of relative poverty use data from North America and Western Europe. They include the Scandinavian countries, which combine some of the world's narrowest income distributions (see World Bank, 2011) with high absolute levels of living standards at the lower end. And they also include the example of the USA, which is at the other end of the inequality spectrum in this country set. When these countries are ranked by their PPP-adjusted median income, the USA easily comes out on top, as the American median income exceeds the Swedish median by almost one third. However, the gradient of the income distribution (shown in Figure 4.1) is so much steeper that in the bottom deciles, the ranking reverses. Low-earners in Sweden and Denmark are better off than their counterparts in the USA – in relative terms anyway, but even in absolute terms.

Figure 4.1: The income gradient in the USA, Great Britain, Sweden and Denmark; mid-2000s, annual income in PPP-adjusted Dollars, bottom seven deciles



-based on data from OECD (2008)

The extremely low income of the US bottom decile is probably a statistical artefact: As Chapter 2 has documented, income has become an increasingly poor predictor of the lowest living standards in the UK and the US, but less so in most European countries. But Chapter 2 has also shown that this divergence is largely limited to the very bottom of the distribution, while Figure 4.1 shows that it is only from the fourth decile upwards that the USA shows a clear lead over the Scandinavian countries. At least in this country sample, a trade-off between low-earners' absolute and relative position is not recognisable. Over most of the range, real incomes in the US are well above Scandinavian levels, but at the given gradient, this lead is simply not large enough to lift the lowest income strata above Scandinavian levels as well.

And these are only the polar cases of the country sample's inequality spectrum. The sample also includes the Mediterranean countries, where the real incomes of low-earners are substantially below Scandinavian levels, while median incomes are lower as well (see OECD, 2008). On the whole, in this country sample, there is a mildly positive correlation between absolute and relative living standards among the least well-off (Kenworthy et al, 2008). The

most equitable countries also record some of the highest absolute living standards at the lower end, while some of the least equitable countries also record some of the lowest absolute living standards at the lower end. In this sample, countries which engage in extensive income redistribution do not necessarily show low rates of overall income growth, and countries where the extent of income redistribution is more limited do not necessarily show high rates of overall income growth. On the basis of this country sample, it would be easy to conclude that there simply is no trade-off between redistribution and growth.

Effectively, the studies discussed in subchapter 4.2 conclude precisely that, insofar as they address the question. But this is a very strong conclusion given how limited the country sample is, and how little the studies attempt to control for other factors that might affect a country's economic performance and distributional outcomes. It would not be sensible to criticise the selection of countries, because this is not the authors' choice: It is largely dictated by the availability of income data in an internationally harmonised format. But the weakness of these poverty studies is that they largely fail to consult the wider economic literature on the relationship between taxation, redistribution and growth. They fail to double-check whether their results are, in this respect, in line with those of the larger body of literature, and especially with the studies that use larger country samples and include more control variables.

Do high levels of taxation deter economic progress by discouraging work, saving, investment in physical and human capital, an efficient factor allocation, entrepreneurship, innovation etc.? Or do the positive effects of the corresponding government spending on education, infrastructure, R&D, social stability etc. outweigh such costs? This relationship is among the most extensively researched topics in economics. Since the emergence of modern growth models beginning with Solow (1956), literally hundreds of economic papers have studied the relationship between the level and/or structure of taxation, government spending, and economic growth (or some of its components). Literature summaries are available from Engen and Skinner (1996), Bleaney et al (2001), Slemrod (2000), Fölster and Henrekson (2001), as well as Bergh and Henrekson (2011). The literature is far from conclusive, and a lot of unresolved issues remain. This is perhaps not surprising given that some of the most important confounding factors, especially cultural ones, may not be expressible at all in a quantitative model, unless one counts makeshift variables like 'country-specific fixed effects' as a substitute. What complicates matters further is the fact

that the models differ greatly in specification and sophistication, and are therefore not always easily comparable to one another. But nevertheless, taken together, a few features stand out from the literature:

- More sophisticated models, which study the impact of specific tax rates on specific economic agents, are more likely to find adverse impacts than simple models which remain at the level of broad national aggregates. To put it simply: Models which express the GDP growth rate as a function of the economy's average tax rate, or the level of GDP as a function of the level of government spending, are not likely to find conclusive evidence either way. But models which examine the impact of, for example, changes in the top rate of income tax on the labour supply of those with (potential) earnings in the relevant income range are more likely to do so. This is a generalisation: There are highly aggregated studies which find strong effects of taxation, and there are disaggregated studies which do not. But by and large, the more specific studies are more likely to find effects than the highly aggregated ones, and this pattern favours the notion that economic incentives matter greatly for economic performance. The studies which fail to find a relationship may often fail to do so because their level of aggregation is too high, not because the relationship does not exist.

- Economic agents can respond to a given tax (dis)incentive in a variety of ways, and this has to be kept in mind when interpreting the inconclusive studies. For example, if a model tests whether a change in income tax has had an impact on the number of hours worked, and fails to find it, it has not 'proven' that the tax has no effect whatsoever. People may still respond to the incentive, but just not in this particular way. More sophisticated models therefore explore several avenues, for example by incorporating some measure of labour 'quality' or 'effort' (e.g. Feldstein, 1995), or by extending the analysis to potential second-earners in a household (e.g. Zimmermann, 1993). Such models are more likely to find responses to taxation than models which allow for only one type of response. Again, this is a pattern which strengthens the notion that tax incentives play an important role for economic performance.

- It would overstretch the literature to claim that the negative effect of *overall* tax levels on economic performance is safely established. But it does not overstretch the literature to make this claim for the more redistributive forms of taxation. The

effect of marginal tax rates is more firmly established than the effect of average tax rates (e.g. Koester & Kormendi, 1989; Padovano & Galli, 2002; Mullen & Williams, 1994). It is well established that the taxation of capital and/or business activity comes at an economic cost (e.g. Lucas, 1990; Clausing, 2007; Johansson, 2008). It is well established that top incomes are especially responsive to taxation (Slemrod, 2000). It is thus safer to speak of a trade-off between redistribution and growth, rather than a trade-off between taxation and growth.

This is not a coincidence. Even those studies that do not support the notion that high tax levels damage economic performance do not argue that taxation is irrelevant. Rather, these studies tend to argue that the *structure* of taxation is far more important than its *level*. They argue that taxation is only economically harmful insofar as it distorts economic behaviour, and the degree to which a tax does that is not simply a function of its rate. Studies of this type often recommend behaviourally neutral taxes rather than low taxes (e.g. Mirrlees et al, 2011). But the aim of neutrality collides with the aim of progressivity. Progressive taxes are almost by definition non-neutral; they are designed to be selective and targeted.

A similar consideration applies to social security contributions. Contributions which are actuarially linked to future entitlements are not taxes; they are more akin to compulsory savings, or the compulsory purchase of an insurance product. To the extent that they are genuinely actuarial contributions, social security contributions need not have a negative impact on work incentives, even if their level is very high. But to the extent to which this is the case, social security systems are not systematically redistributive, or no more so than private insurance or private savings. Social security systems only become redistributive by deviating from the contributory principal, and insofar as they do, contributions become de-facto-taxes (see James, 1997; Orszag & Stiglitz, 1999; Edwards & Cox, 2002).

The economic analysis of the impact of taxation on economic performance is far from straightforward, which is why it is not surprising that disagreement in the literature remains. There is no shortage of studies which find the economic effects of taxation to be modest. But it is notable that the more sophisticated models, which allow for a variety of behavioural responses rather than just e.g. a reduction in working hours, are more likely to find substantial efficiency losses associated with taxation. This is also reflected in a literature survey by Keane (2011), which begins with a discussion of simple models that fail

to find much of an effect, and then progresses to the more elaborate ones. The former still represent the majority: "At least for men, *it is fair to say that the majority of studies find rather small elasticities with respect to after-tax wage rates. This, in turn, implies that efficiency costs of distortionary income taxation are small"* (Keane, 2011, p. 962; emphasis in the original). But once a wider range of possible behavioural responses to taxation is considered, the assessment changes: *"My review suggests that labor supply of men may be more elastic than conventional wisdom suggests. When I simply average the Hicks elasticity across twenty-two well-known studies of males, I obtain 0.31. […] [I]f one weighs studies by features I argued are desirable, such as […] accounting for human capital, one gets a larger value of the Hicks elasticity. For women, most studies find very large labor supply elasticities. This is especially true of papers that calculate "long run" elasticities—meaning some combination of fertility, marriage, work experience, and education are allowed to respond to wage changes, rather than being held fixed"* (ibid, p. 1071).

The emphasis so far has been on tax systems, even though it would be more accurate to refer to tax *and transfer* systems. The literature on the impact of income transfer systems on labour supply is interwoven with the tax literature, especially in the case of means-tested transfers: Since these transfers are withdrawn as the recipients' earned income rises, the withdrawal rate acts like an implicit tax on labour. The effects of this implicit tax are studied in the same way as the effects of explicit taxes, and they do not seem to be any different (e.g. Blundell, 2001; Meghir and Phillips, 2008). Other parts of this literature are sufficiently different from the tax literature, but complementary to it. Perhaps the most well-established finding is that economic inactivity has a self-perpetuating effect, as both formal skills and work-related 'soft skills' deteriorate with the time spent outside of the labour market (e.g. Pissarides, 1992; Keane and Wolpin, 1997; Strulik et al., 2006; Ljungqvist and Sargent, 2008). There is also substantial evidence that controlled for other factors, higher income replacement rates are associated with lower levels of work search effort among jobseekers (Krueger and Mueller, 2008a; Krueger and Mueller, 2008b; Layard et al., 2005; Meyer, 1990; Feldstein and Poterba, 1984). This is not an argument against generous support systems. Other aspects of system design can counter the disincentive effect, for example work search conditions or time limits. But the literature shows that work incentives have a real effect. Evaluating an income replacement system solely on the grounds of 'generosity', as some of the models described in subchapter 4.2 do, is not enough.

The implication of the literature is not that all countries 'should' aim to establish low-tax systems with a flat structure (or conditional welfare systems). There can be no 'optimal' level of taxation and no 'optimal' level of progressivity, even if the impact on growth could be precisely known. The design of tax system is always about balancing competing aims, and economic theory cannot offer any guidance on what weight should be given to which aim. What it can do is stated in the Mirrlees Review as follows: *"Optimal tax theory is all about the choice of a system of taxation that balances efficiency losses against the government's desire for redistribution and the need to raise revenue. It provides a way of thinking rigorously about these trade-offs, and ensuring that value judgements reflecting concerns about income distribution and well-being are made explicit while the efficiency costs of achieving that redistribution are properly taken into account"* (Mirrlees et al, 2011, p. 36).

Judged against this standard, the studies discussed in subchapter 4.2 do not come out well. They do not phrase their recommendations in terms of a trade-off, but present them as if they were a win-win situation. They do not make underlying value judgements explicit. They do not acknowledge the existence of efficiency costs of redistribution. They mention the benefits, but not the cost, which makes them an unbalanced account.

4.4 The gap between the poverty literature and the economic literature

In studies on relative poverty, the Scandinavian countries, and especially Sweden and Denmark, occupy a special place.[17] They achieve some of the lowest relative poverty rates in the world, and as some studies have pointed out, the low levels of relative poverty do not come at the expense of greater absolute poverty (Scruggs and Allen, 2006; Kenworthy, 1999). Poverty in Scandinavia is low by virtually any measure. On measures of quasi-absolute poverty or material deprivation, their position is less outstanding, but still clearly among the better examples. How can this be reconciled with the literature discussed in the

[17] The case of Iceland is not considered in this chapter because Iceland is much less frequently included in either poverty studies or economic studies. Data for Norway are generally included in these studies, but not especially emphasised, presumably because the country's oil wealth makes the results less generalisable. In what follows, 'Scandinavia' means 'Sweden, Denmark, Norway and Finland'.

previous subchapter, which has, on balance, suggested a long-term trade-off between redistribution and growth?

There is no obvious answer, because the economic literature tends to concentrate on either aggregate outcomes for larger country samples, or on time series within a single country. It is not common in this field to subdivide countries into regional clusters, and compare them to one another. Poverty studies are very different in this regard. They frequently form country groups, not based on geography but on common characteristics of the country's social policy tradition. The most common grouping is into 'Anglo-Saxon', 'Nordic/Scandinavian' and 'Continental European', or some variation thereof, with Mediterranean countries sometimes forming a cluster of their own. Economic models of taxation and growth rarely do this, and the result is that the poverty literature and the economic literature are, in a sense, 'talking past each other'. The latter shows an adverse impact of high marginal tax rates on long-run economic performance, the former points to the low poverty rates, relative *and* absolute, in Scandinavia. These two findings are not necessarily in conflict. It is entirely possible that country-specific features enable the Scandinavian economies to withstand higher levels of redistribution than other economies, and it is also possible that these features are beyond the reach of the control variables used in economic models. But the problem is that economic papers do not usually explore this possibility. They do not explore whether the sensitivity of economic performance to tax rates/levels varies systematically across regions, let alone what causes the variation. They often assume, implicitly, that the responsiveness to taxation is the same everywhere. They therefore leave many questions unanswered, which can be illustrated with a quote by Sweden's former Prime Minister Göran Persson, referring to the country's economic performance: *"Think of a bumblebee. With its overly heavy body and little wings, supposedly it should not be able to fly – but it does"* (quoted in Thakur et al, 2003).

To stay within this metaphor: The economic literature is akin to a collection of studies showing that when looking at all insects taken together, body mass is negatively, and wingspan is positively associated with the ability to fly. Within the same metaphor, the poverty literature would be more like a set of studies pointing out the high flight performance of bumblebees. If the latter can be criticised for concentrating too much on selected species while ignoring the whole, the former can be criticised for looking only at the whole, thus failing to explain much systematic variation.

There are exceptions. Bergh and Henrekson (2011) find a negative relationship between taxation and growth on the whole, but argue that cultural particularities of the Scandinavian economies make them more resilient to high tax levels than other economies. Still, what is striking is that while these authors state their general economic findings in rather certain terms, their discussion of Scandinavian particularities is much more tentative. This illustrates how well-researched the former and how under-researched the latter area is.

In short, there are complex unresolved issues in the economic literature. This chapter cannot even begin to fill this gap. But it can point into the general direction where some of the answers are likely to be found.

How special is the Scandinavian welfare model?

There are many difficulties in comparing social expenditure internationally, one of the more obvious ones being the differences in the tax treatment of transfer income. A particularity of the Scandinavian welfare systems is that they treat almost all types of state transfers as taxable income, and tax them at relatively high rates: In Sweden and Denmark, tax 'revenue' from these sources amounts to almost 5% of GDP (Eurostat, 2009b, pp. 1-3). It is therefore more sensible to compare net social expenditure, i.e. social expenditure minus tax revenue collected through the taxation of transfers, because this automatically corrects for cross-country differences in the tax treatment of transfer income.

Table 4.1 ranks Western countries by net public social expenditure as a percentage of GDP. On this basis, the Scandinavian countries still occupy very high ranks, but the region loses its exceptionality. There is a divide between Western Europe and the Anglosphere, but no obvious geographical pattern within Western Europe. The UK, in terms of social expenditure, is more 'Western European' than 'Anglo-Saxon'. So to some extent, the special role that the Nordic countries play in the poverty literature is the result of an idiosyncrasy of accounting. This idiosyncrasy must also be kept in mind when comparing figures on total government expenditure, which, in an unadjusted format, are shown in the column on the right.

Table 4.1: Net social expenditure and total government expenditure, % of GDP, selected OECD countries, 2007

	Net social expenditure (% of GDP), 2007	Total government expenditure (% of GDP), 2007
France	29.9%	52.4%
Germany	27.2%	43.5%
Belgium	26.2%	48.4%
Sweden	26.0%	51.0%
Italy	25.8%	47.9%
Austria	24.8%	49.0%
Denmark	23.9%	50.8%
Portugal	23.6%	44.4%
UK	22.7%	44.1%
Finland	22.6%	47.3%
Spain	21.6%	39.2%
Netherlands	20.4%	45.3%
Japan	20.3%	35.9%
Norway	20.0%	41.2%
Canada	19.4%	39.4%
US	18.9%	36.8%
New Zealand	18.4%	39.6%
Australia	18.2%	33.4%
Ireland	16.8%	36.7%

-gathered from OECD Social Expenditure Database (2011), OECD (2011) and OECD (2011a)

Not all of the models discussed in subchapter 4.2 use social expenditure as an independent variable. Some prefer a composite index of 'welfare generosity', usually based on the replacement rates of various programmes. The problem with these generosity indices is that they conflate two distinct functions of welfare states: intra-personal and inter-personal redistribution. The latter refers to redistribution from X to Y, the former to redistribution from the young/healthy/employed X of today to the old/sick/workless X of tomorrow. This latter function is not 'redistribution' in the everyday sense of the term; rather, it is an alternative form of saving and/or insurance.

The extent to which a transfer payment is redistributive in the inter-personal sense has nothing to do with how generous it is. In a purely actuarial/contributory system, there would be no redistribution at all, regardless of how high the replacement rates are. In contrast, a system based purely on need (e.g. a purely means-tested system) will be redistributive even if it is very minimalistic. From this perspective, the above-mentioned poverty models by Kenworthy (1999) and Scruggs and Allen (2006) miss the point. They

intend to show that redistribution does not have adverse economic impacts, but their indices of generosity do not measure redistribution. To put it bluntly: A private fire insurance policy could also attain a high generosity score on these indices, provided the insurance sum is high. But this is certainly not the kind of redistributive generosity which the authors have in mind. It would have been more conducive for their purposes to use an 'index of redistributiveness' rather than an index of generosity.

There are no indices of redistributiveness, but there are indices of progressivity, which measure to what extent transfer payments systematically favour the lower end of the income distribution. This is not quite the same as the extent of redistribution, because it is based on income at a single moment in time, and a transfer that is redistributive in a snapshot perspective need not be redistributive in terms of permanent income (see Chapter 3 on this distinction). Neither does it really show to what extent entitlement to transfers has been earned through prior contribution or tax payments. But progressivity should be at least correlated to redistributiveness. Progressivity measures for several welfare programmes are shown in the table below. Values are normalised to a range between +1 and -1, with negative values indicating that low-income earners receive a disproportionate share of spending. Programmes which record positive values are not in themselves redistributive.[18] A value of zero means that a transfer does not, in itself, alter the income distribution.

The comparison shows that Nordic welfare programmes are not generally more redistributive than their counterparts in English-speaking countries, or the OECD average.

[18] What is probably redistributive is the overall effect of these transfers and the corresponding tax payments taken together. If middle-income earners receive a little bit more than low-earners, but pay vastly greater amounts into the system, the overall effect is still redistributive.

Table 4.2 Measure of progressivity (–1 = most progressive; +1 = least progressive) for selected transfer types: Nordic countries vs. Anglosphere

	Disability Benefits	Family Benefits	Unemployment benefits	Housing benefit	Others (e.g. social assistance)
Nordics:					
Denmark	-0.18	-0.04	-0.22	-0.58	-0.37
Finland	+0.07	-0.07	-0.24	-0.61	-0.39
Norway	-0.06	-0.06	-0.12	-0.65	-0.24
Sweden	0.25	-0.07	-0.10	-0.66	-0.16
Anglosphere:					
Australia	-0.35	-0.33	-0.44	n/a	-0.40
Canada	n/a	-0.46	-0.06	n/a	-0.22
Ireland	-0.27	-0.21	-0.07	-0.46	+0.02
New Zealand	-0.35	-0.43	-0.38	n/a	-0.14
UK	-0.20	n/a	n/a	-0.46	-0.37
USA	n/a	-0.56	0.07	n/a	-0.10
OECD average	-0.31	-0.33	-0.19	-0.37	

-based on figures from OECD (2008, pp. 105-106)

Table 4.2 only shows selected welfare programmes, without adjusting for their relative importance, and it only shows the spending side in isolation. The total volume of redistribution achieved by the tax and benefit system as a whole can be shown by contrasting Gini coefficients of market income to Gini coefficients of disposable income. The difference between the two is, by definition, explained by taxes and cash transfers. The figures are shown in Table 4.3, where the countries are sorted by the point reduction in the Gini coefficient they achieve through redistribution (the right-hand column).

The Scandinavian countries do indeed achieve large decreases in inequality. But again, the divide is between Western Europe and the Anglosphere (minus the UK), not within Western Europe. By Western European standards, the amount of redistribution in the Scandinavian countries (except Finland) is high but not exceptional. The UK and Sweden, which are often at opposite ends in relative poverty studies, achieve practically the same point reduction in Gini coefficients.

The reason why Sweden, Denmark and Norway (Finland is different in this respect) achieve very low levels of income inequality is not just government redistribution. Rather, these countries already start off with remarkably low levels of inequality at market incomes. Their point reduction in the Gini coefficient is about the same as in the UK, but the UK starts off with a much higher level of inequality *before* redistribution.

Table 4.3 Gini coefficients before and after taxes and transfers, selected OECD-countries, mid-2000s

	Gini coefficient before taxes and transfers	Gini coefficient after taxes and transfers	Point reduction in Gini coefficient through taxes and transfers
Belgium	0.408	0.256	0.152
Austria	0.406	0.261	0.146
Finland	0.436	0.258	0.145
France	0.403	0.292	0.139
Denmark	0.374	0.243	0.131
Italy	0.465	0.334	0.130
Norway	0.376	0.256	0.120
Germany	0.420	0.300	0.120
Portugal	0.458	0.347	0.111
UK	0.456	0.345	0.111
Sweden	0.368	0.259	0.109
Australia	0.418	0.324	0.094
Netherlands	0.391	0.297	0.094
Spain	0.405	0.313	0.092
Canada	0.416	0.328	0.087
US	0.453	0.370	0.083
New Zealand	0.403	0.323	0.080
Japan	0.392	0.323	0.068
Switzerland	0.338	0.290	0.048
Iceland	0.346	0.301	0.045
South Korea	0.323	0.300	0.023

-based on data from OECD (2011a)

In short, due to the indicators they choose, the poverty studies discussed in subchapter 4.2 exaggerate the exceptionality of the Scandinavian tax and benefit systems. The low levels of poverty in these countries cannot be ascribed to welfare policies lone.

The wider economic environment

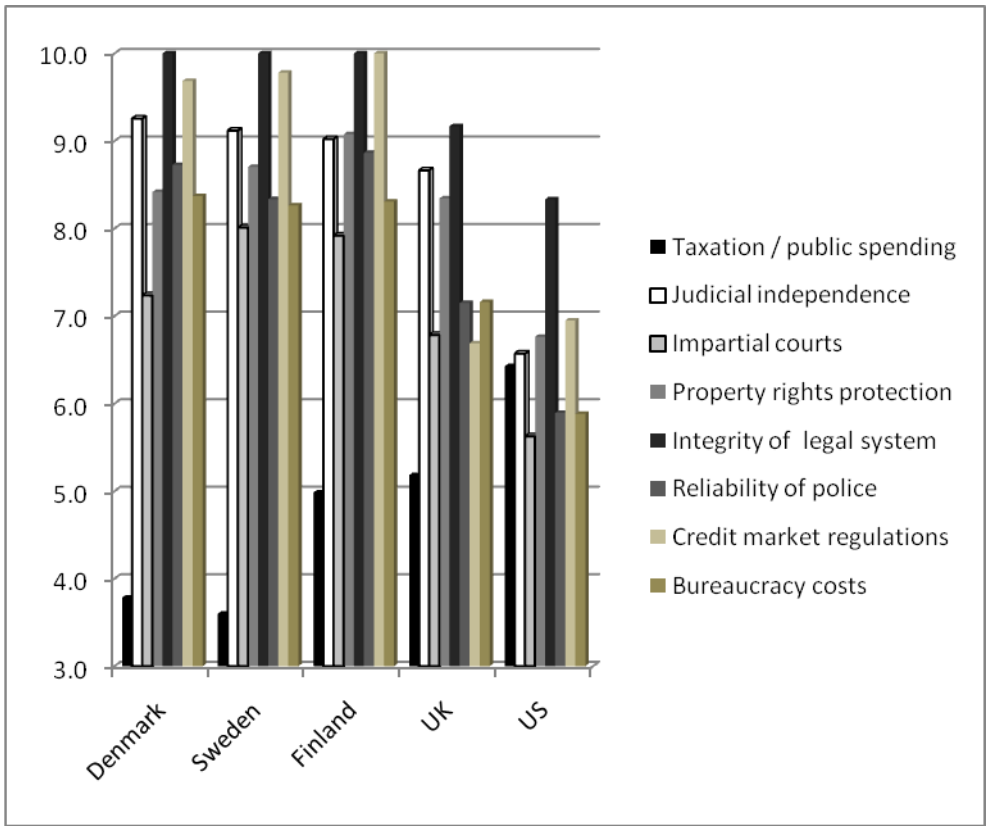
Taxation is only one among many determinants of economic performance. Economic models always include controls variables, but they often focus on large, readily quantifiable aggregates, e.g. in areas like demographics or human capital. More subtle features of the business environment are therefore, arguably, improperly accounted for.

'Business environment' is an abstract concept, but there are summary measures of factors which are generally associated with economic competitiveness. The most well-known data source for this is probably the World Economic Forum's 'Global Competitiveness Report' (World Economic Forum, 2012). Alternative measures with a similar purpose are available

from the OECD's Economic Surveys (e.g. OECD, 2011b), the World Bank's 'Doing Business' reports (e.g. World Bank, 2009), the annual surveys of the Heritage Foundation (2012) and those of the Fraser Institute (Gwartney et al, 2012). Figure 4.2 shows a selection of such indicators, with values normalised to a scale from 0 to 10, with higher values representing greater competitiveness.

On this account, the Scandinavian economies show a profile dominated by extremes. They attain some of the lowest competitiveness scores in the world on measures which capture dimensions of taxation and public spending. But they also attain some of the highest scores in the world on almost every other measure.

Figures 4.2: Summary indicators of the business environment, 0-10, 10 = most competitive, five countries



-gathered from Gwartney et al (2012)

This result does not seem to be sensitive to how the indicators are constructed. With varying intensity, the different data sources listed above find the same basic pattern, which also shows little variation over the years.

Studies on relative poverty often point to the solid performance of the Scandinavian economies, and present it as evidence that concerns about adverse economic side-effects

of redistribution are unfounded. The above profile, however, is compatible with a rather different interpretation: On its own, the Scandinavian economies' high level of taxation could well be a competitive disadvantage, but a disadvantage which is compensated for by their exceptionally good performance on so many other accounts. If so, the basic trade-off would still be present. To go back to Göran Persson's bumblebee metaphor: The bumblebee compensates for its weight and short wingspan through other means, but it does not 'prove' that weight and wingspan are irrelevant.

Public support

There is a substantial body of research showing how public attitudes towards taxation and redistribution differ systematically across developed countries (e.g. Svallfors, 1997; Edlund, 1999; Alesina & Glaeser, 2004; Brooks and Manza, 2007; Mau, 2007; Sefton, 2009; Horton & Gregory, 2009). It is a consistent finding that support for collective provision and generous welfare spending is much higher in Scandinavian countries than in the Anglosphere. This is, of course, a generalisation. There is enormous variation between different components of welfare states within countries. The British NHS, for example, enjoys phenomenal levels of public support, while the Norwegian social housing sector has considerable reputation problems. There is also variation within both country clusters. But the splitting of attitudes into an 'Anglo-Saxon' and a 'Nordic' country cluster it is nevertheless not an oversimplification.

The reasons for these differences in attitudes are not yet fully understood, and remain a topic of disagreement. But there is agreement that they are persistent phenomena, and that they are often important determinants of the social policies a country adopts (Bergh & Bjørnskov, 2011; Bergh &Henrekson, 2011), even if they can be overridden by other factors. In poverty studies, in contrast, levels and structure of social expenditure are often treated as easily malleable policy choices, readily transferable from one country to another. Yet if they are reflections of different social consensuses, a given tax and benefit policy may also have different economic impacts in different countries.

While there is no consensus on what exactly drives international differences in attitudes towards redistribution, what is clear is that there is a close correlation between support for redistributive spending, and trust in other people's willingness to reciprocate and cooperate (e.g. Sefton, 2009, pp. 228-242; Horton and Gregory, 2009, pp. 110-130). Scandinavian societies in particular are characterised by an exceptionally high level of

confidence in their fellow citizens' cooperativeness. Trust that welfare recipients are genuinely in need of help, that levels of fraud and misuse are low, and that recipients are doing their best to find work again, is highest among Scandinavians. They are also least likely to believe that poverty had behavioural explanations.

Such considerations may not be quantifiable in the same sense as a variable in an economic model, but there are nevertheless indicators which provide some impression about the extent of international variation. An example which is sometimes used in literature on 'social capital' is the 'Trust Index', which is based on two statements from the World Values Survey: *"Most people can be trusted"*, and *"You can't be too careful in dealing with people"*. A country's score on the Trust Index is simply the share of respondents who agree with the first statement, minus the share who agree with the second statement, plus one hundred (to avoid negative values). Unfortunately, this index does not necessarily measure the kind of trust that is of interest in here: Confidence that most people behave honestly in everyday dealings is not necessarily the same as confidence that most people will not overuse government transfers. But the Trust Index is at least available for a large set of countries, and for several years. The scores are shown in the table below. The Scandinavian countries come out on top, while the English-speaking countries form no particular cluster.

The index attempts to measure respondents' trust in their fellow citizens. But since politically mediated redistribution involves government institutions, trust in these has to be considered separately. The perhaps most well-known proxy for this is the Corruption Perceptions Index compiled by Transparency International. It is not necessarily a measure of 'true' levels of corruption, but a measure of corruption as perceived by those who interact with public institutions. The score is normalised to a scale between 0 and 10, with lower values indicating higher levels of corruptions. Again, the Scandinavian countries come out with very high scores.

Table 4.4: Indicators of trust, selected OECD countries

	Trust index (0 – 200)	Corruption Perceptions Index (0 – 10)
Norway	148	9.0
Sweden	135	9.3
Denmark	132	9.4
Finland	118	9.4
Switzerland	107	8.8
New Zealand	102	9.5
Australia	92	8.8
Netherlands	91	8.9
Canada	86	8.7
Japan	80	8.0
USA	79	7.1
Germany	76	8.0
Ireland	72	7.5
Austria	70	7.8
Great Britain	62	7.8
Italy	61	3.9
Greece	55	3.4
Spain	41	6.2
Portugal	22	6.1

-gathered from ASEP/JDS (2011), World Values Survey (2011); Transparency International (2011)

Do these findings have any implications for poverty research? Could it be that the disincentive effects of a given level of taxation are less pronounced in environments characterised by high levels of trust? Do high trust levels make higher tax levels more economically viable?

It is an open question. There are economic models which have tried to incorporate measures of trust (e.g. Berggren et al, 2008; Delhy and Newton, 2005), there is no direct evidence suggesting that high levels of trust cushion the disincentive effects of taxation. In a high-trust environment, people may be more likely to support public spending levels on an abstract level, but this need not affect their responses to tax incentives at the micro level.

To claim that high levels of trust offset the negative impacts of taxation would mean reading too much into the literature. What is safe to say, however, is that levels of public expenditure are affected by long-term cultural factors, like trust levels, the determinants of

which are not fully understood. They are not as readily transferable from one country to another as some poverty studies have effectively assumed them to be.

Time-series evidence

Models which look at responses to taxation within individual countries over time are generally more conclusive than cross-country studies. Their results may be less generalisable, but their strength is that they automatically control for some of the long-term confounding factors that are difficult to incorporate into a quantitative model.

In time series studies, the results for the Scandinavian countries are far from unusual. They show the kind of responses that 'orthodox' economic models would predict (e.g. Holmlund & Söderström, 2007). Scandinavian economies show a high resilience to tax levels, but major changes in tax rates have generally had the expected effects.

Trabandt and Uhlig (2009) have estimated country-specific Laffer-curves for the taxation of labour, capital, and consumption. From this, they derive an estimate of the extent to which a modest tax reduction would be self-funding, by stimulating additional economic activity. If there is any discernible self-funding effect, tax rates must already be in a region where they suppress some economic activity.[19]

On this measure, the taxation of labour income in Denmark, Finland and Sweden is in a region where reductions in the tax burden would have such a strong stimulating effect on labour supply that the expansion of the tax base would offset more than two thirds of the initial revenue shortfall. For the taxation of capital in Sweden and Denmark, the self-funding effect exceeds 100%, which is the theoretical extreme case of an economy being 'on the wrong side of the Laffer curve'. The results are strengthened, and exacerbated, by a sequel by the same authors, which also takes account of responses in human capital formation (Trabandt & Uhlig, 2011). These findings support the hypothesis that the Scandinavian economies are able to offset the negative impacts of taxation through strengths in other areas which determine economic performance. But they are not immune to the effects of taxation, and their economic outcomes do not 'prove' that taxation is irrelevant.

[19] In theory, tax rates could also be below the growth-maximising level, in which case the self-funding effect would be negative.

In the three English-speaking countries for which data is available, the self-funding effects are lower, but not trivial.

It has been argued above that the willingness to pay taxes differs substantially across countries, by reference to studies which use survey evidence. A more direct indicator of whether a given tax level is appropriate for a given country, in the sense of being backed by public support, is the size of the shadow economy. The shadow economy is the informal part of the market economy; the part which takes place outside of the legal framework, but which could theoretically take place within it, because the activities are not in themselves illegal.

Estimates of the size of the shadow economy, expressed as a proportion of official GDP, are shown in the right-hand column of Table 4.5. The same study contains a brief overview of the literature on the determinants of the shadow economy's size, which concludes: *"In almost all studies it has been ascertained that the overall tax and social security contribution burdens are among the main causes for the existence of the shadow economy"* (Schneider, 2007, p. 5).

Even a brief glance at the data shows that tax levels cannot be the only determinant. The Scandinavian shadow economies are much smaller than tax levels alone would predict, which provides additional support for the trust/cohesiveness hypothesis. Nevertheless, the size of the Scandinavian shadow economies is above the (unweighted) OECD average, accounting for between one sixth and one fifth of their economies. For a narrower country sample, similar results have been found by Pedersen (2003). 'Tax tolerance' may be unusually high in this region, but it is not unlimited. It has reached economically distorting levels.

It is important to note that the relatively large size of the shadow economies in the Nordic countries is not simply the result of better detection capabilities or data collection. The estimates of shadow activity in Table 4.5 do not come from national sources. They have been inferred from macroeconomic indicators which are thought to be closely correlated with illicit activity (e.g. demand for cash). The resulting estimates are then corroborated through more direct evidence from sources like anonymous surveys. It may well be that the administrative capacity to detect shadow activity is higher in the Nordic countries than in e.g. the Mediterranean countries. But this would not affect the estimates in Table 4.5, which are not related to how much of the illicit activity is detected by the authorities. If

anything, better detection capabilities should lower those figures, because the risk of engaging in shadow activities is higher in countries where administrative capacities to detect such activities are greater.

Table 4.5: Indicative measures of the economic cost of taxation

	Degree to which a cut in labour taxes would be self-funding	Degree to which a cut in capital taxes would be self-funding	Shadow economy in % of official GDP
Nordics			
Denmark	79% - 83%	126% - 137%	16.1% - 18.0%
Finland	68% - 70%	90% - 92%	15.8% - 18.1%
Norway	n/a	n/a	16.8% - 19.1%
Sweden	83% - 86%	109% - 116%	16.3% - 19.2%
Anglosphere			
Australia	n/a	n/a	12.8% - 14.3%
Canada	n/a	n/a	14.1% - 16.0%
Ireland	34% - 35%	48% - 50%	14.1% - 15.0%
New Zealand	n/a	n/a	10.9% - 12.8%
UK	42%	73%	10.3% - 12.7%
US	30% – 32%	46% -51%	7.9% - 8.7%
OECD average	n/a	n/a	*14.8% - 16.8%*

-data gathered from Trabandt & Uhlig (2009), Schneider (2007)

4.5 Conclusion

The short summary is that there is a trade-off between relative absolute and relative living standards of the least well-off in so far as both are affected by the tax and benefit system, and that the literature on relative poverty fails to acknowledge this trade-off. This chapter should not be read as an endorsement of the studies on absolute living standards discussed in section 4.1, which can be critiqued on many other grounds. But at least, these studies acknowledge the existence of a trade-off explicitly, and take a position on it. One finds no such acknowledgement in the studies on the determinants of relative poverty, which generally identify government redistribution through the tax and benefit system as the major determinant of poverty. These studies either do not address the trade-off at all, or if they do, they take 'absence of evidence' for 'evidence of absence'. Since no trade-off is visible in their country samples – which seldom include more than about a dozen Western

European and North American countries – they conclude that no trade-off exists at all. To some extent, their results are driven by the Scandinavian countries. This region achieves some of the world's lowest rates of relative poverty, but living standards of the least well-off are also high in absolute terms. Judging from a country sample in which Sweden, Denmark, Finland and Norway account for a marked share of the variation, the interpretation that relative and absolute poverty can be minimised jointly is indeed not far to seek. Based on such a country sample, it seems natural to conclude that relative and absolute poverty respond either largely to the same policies, or that they respond to policies which are distinct but easily compatible.

But how generalisable are these findings? Subsection 4.3 has addressed this question by contrasted the poverty literature to the wider economic literature on taxation, public spending and growth. Once the poverty literature is properly placed into this context, one obtains a very different impression. The economic literature is somewhat ambiguous about the role of overall tax levels, but much more conclusive about redistributive taxation. High tax rates on labour and capital, and especially high marginal tax rates, tend to have negative long-term effects on economic performance through a variety of channels. The forms of taxation which are least economically damaging are those which are most behaviourally neutral. But the more neutral forms of taxation – especially consumption taxes – are also the least redistributive ones, and they can even be regressive.

Section 4.4 has concentrated on the solid economic performance of high-tax Scandinavia, a region which occupies a special place in the poverty literature. This region is one of the reasons why the poverty literature and the economic literature appear to be 'talking past each other', with the latter emphasising the disincentives arising from redistributive taxation on the whole, and the former pointing to the Scandinavian counterexample. The economic literature is not especially helpful in this regard: With a few noteworthy exceptions, economic papers have not commented on the Scandinavian results, treating them merely as a 'special case'.

The suggestions made in subchapter 4.4 are necessarily tentative and indicative. This thesis is not about the economic and social history of Scandinavia. But the tentative suggestion is that the 'special case' is not that special. The region combines a number of favourable features which enable it to cope with high levels of taxation, and while none of these features is unique to Scandinavia, their combination and intensity is. The Scandinavian economies achieve very high scores on almost every determinant of economic

competitiveness except taxation, which explains their high overall positions in competitiveness rankings. They do not 'prove' that taxation is irrelevant. If anything, they show that compensating the effects of a heavy tax burden requires extraordinarily good performance in virtually every other area of economic policy. Further, the region is characterised by high levels of interpersonal trust and trust in government institutions, which could also make higher tax levels more viable than elsewhere.

With all that in mind, within-country time series studies of the Scandinavian economies nevertheless produce results that are fully in line with the 'orthodox' tax literature. In time series studies, which automatically control for factors which are difficult to quantify and which cross-country studies therefore find difficult to account for, the Scandinavian economies respond to changes in tax incentives in the predicted way. At the same time, while the size of the Scandinavian shadow economies is not as large as tax levels would predict, they are still above the OECD average. The region may be more 'tax tolerant' than any other, but it is not immune to tax disincentives.

There are further particularities of the Scandinavian welfare states and income distributions which ought to be kept in mind when interpreting the results of relative poverty studies. It is an unusual feature of these countries' tax and benefit systems that transfer income is highly taxed. For most countries, the difference between gross social spending and net social spending – a measure which accounts for differences in the tax treatment of benefits – is small or negligible. In the Scandinavian countries, the difference is substantial. It is a coincidence that the countries with the lowest relative poverty rates are also the ones which share this unusual accounting practice, and if this particularity is not accounted for, it must result in an overestimation of the impact of social expenditure.

On a net basis, the Scandinavian welfare states are still among the largest in the world, but their size is not exceptional. Neither is their redistributive effect. These countries' income distributions are already very narrow *before* taxes and transfers. Studies on the determinants of relative poverty, however, simply take the distribution of market incomes as given. Factors which might reduce differences in market incomes – e.g. high employment rates and/or high skill levels among low earners – can therefore not be identified as determinants of poverty.

Thus, studies which claim that other developed countries could achieve Scandinavian poverty levels by simply importing Scandinavian levels of taxation and social spending are

not comparing like with like. They imply a win-win situation where trade-offs exist. The trade-off, meanwhile, is not just a theoretical one. It is not a trade-off that could arise in hypothetical situations, but a trade-off which permeates large areas of actual economic and social policy. Changes to the tax and benefit system almost always involve both distributional and incentive considerations. They may not always be explicitly evaluated in terms of their impact on poverty, but as long as poverty is measured in a way that is so intricately linked to the shape of the income distribution, the two are hardly separable. In different variations, the basic trade-off described in this chapter is constantly present.

None of this means that a commitment to economic progress requires acceptance of, or indifference to inequality. The OECD (2011a) has conducted a major review of the drivers of inequality in developed countries, and finds that some of them are, at the same time, hindrances to economic performance. There are policy options which would narrow the income distribution, and which would also promote overall economic efficiency. There is no conflict between the goals of economic progress and of an equitable income distribution as such. But a conflict arises when the latter aim is pursued through redistributive tax and benefit policies, rather than e.g. improvements in skill levels among the least well-off, or increases in labour market attachment.

How important are such considerations for poverty research? As long as we accept the assumption that poverty in developed countries is a purely, or at least predominantly relative phenomenon, the answer is: not very. The critique of relative poverty studies developed here could then be easily dismissed, because even if reducing relative poverty is not a win-win situation, within the assumptions of a relative understanding of poverty, it does not have to be. There may be a trade-off, but within these assumptions, it would be a trade-off between an important and an unimportant aim. Thus, the policy implications would be almost the same as if there was no trade-off at all. This chapter would then have done no more than remove a non-loadbearing column from an edifice which can still easily stand without it.

But this is clearly not the way in which studies on the determinants of relative poverty frame it. When spelled out explicitly, the implications can be quite stark. Policymakers can be faced with a situation in which an economic reform could increase low-earners' incomes in absolute terms, while also risking greater inequality in the bottom half of the distribution. If a purely relative understanding of poverty is followed through consistently, the implication would be that this reform should not be passed. Within this understanding,

the consistent position would be to prioritise relative over absolute living standards. A widening of the gap between the bottom and the middle of the income distribution would have to be avoided, even if it means letting low-earners forego improvements in their living standards. But it is not a position which one will find spelled out explicitly in a study on relative poverty. Arguably, this is the main difference between the studies reviewed in subchapter 4.1 and those reviewed in subchapter 4.2. The former find it much easier to acknowledge the downsides of their policy recommendations, and to spell out the potentially controversial aspects which follow from their analyses. Studies on relative poverty find it difficult to do this.

This is why the focus of the attention will now shift to the theory of relative poverty itself. Is the theoretical case for relative measures strong enough to justify their policy implications, given that the latter can be quite problematic?

5. Relative to what? Testing the robustness of relative poverty measures

Chapters 1 and 2 have documented the emergence of a relative understanding of poverty, and showed how much this has affected public perceptions of the phenomenon, by giving rise to a particular 'poverty narrative'. This has been underscored by Chapter 3, which has documented how weak the connection between this narrative and the living standards of low-earners really is, illustrating the extent to which the narrative has taken on a life of its own. This is problematic because, as Chapter 2 has also shown, relative measures are widely used but frequently misunderstood. They are frequently mixed up with entirely different concepts of poverty. And as Chapter 4 has now shown, the policy implications of relative measures differ strongly, and are often in conflict, with the policy implications that follow from other measures.

Relative measures are widely used in poverty research as well as by international organisations and government departments. They have, of course, never been universally accepted. Critique of relative poverty measures is far from new; in fact, the concept has been subject to criticism from the very beginning. But much of the criticism has arguably missed the point. Critics have often failed to engage with the theory behind relative measures, and have merely criticised some of their statistical properties, and/or the supposed implausibility of the figures they produce.

This chapter will take a very different approach. It will draw a strict distinction between the general theory behind relative poverty – poverty as impeded social participation, not physical deprivation – and the actual statistical indicator. This chapter will not critique the theory. It will accept the proposition that poverty is the inability to fully participate in society, insofar as this is caused by a lack of material resources. There may well be valid objections against this theory, but this chapter will not explore them. It will, instead, evaluate relative poverty measures from within their own premises. It will do so by merging two strands of literature which have thus far stood separately: the poverty literature and the literature on the determinants of 'Subjective Well-Being' (SWB). More precisely, this chapter will ask whether the latter can inform the former, since it concentrates explicitly on the importance of relative and absolute incomes. This is a novel approach insofar as studies on the determinants of relative poverty simply *assume* that welfare is determined by

relative income, while studies on the determinants of absolute poverty simply *assume* that welfare is determined by absolute income. Studies on the determinants of SWB, in contrast, actually test this relationship. They test the relative importance of both, controlled for other factors, while also enquiring through which precise channels relative income affects SWB.

5.1 A critique of previous critiques

The conventional criticism of relative poverty measures (e.g. Saunders, 2009; Lomasky and Swan, 2009; Clark et al, 2006; Sarlo, 2007; Sen, 1983) holds that these measures

- are no more than measures of inequality,
- can produce very low figures amidst widespread misery,
- produce figures that do not generally fall as the economy grows, and
- often produce very high figures in rich countries, which is seen as implausible.

The problem with this line of critique is that it concentrates too much on the measure's statistical properties and too little on the idea behind it. This can lead to a premature dismissal.

Sen (1983), for example, points out that relative poverty could be low under conditions of a famine, provided the famine also reached the middle of the income distribution. Clark et al (2006, p. 53) liken a relative understanding of poverty to *"the belief that if everybody has a toothache, then it does not really hurt."* Critics also take issue with the fact that relative measures generally produce high figures in prosperous countries, which do not generally fall over time. As Clark et al (ibid.) put it: *"[T]he people classified as poor in the United States today have many privileges that Louis XIV did not have"*, while Saunders (2009, p. 14) criticises: *"We do not change the baseline measure on other phenomena when they start to decline, so why do it with poverty? We do not constantly redefine disease, for example, to keep the numbers up when reported cases of smallpox or TB fall. We do not change the definition of functional literacy when more people learn to read, or the definition of infant mortality when more babies start to survive."*

The same critique is applied to cross-country comparisons. Saunders (2009, p. 6) calls it a *"surprising finding that there is more child poverty in Britain than there is in, say, Poland"*,

because *"the people in Britain who get defined as poor actually enjoy a standard of living far higher than that of most Poles"*.

Thus, the critics repeat one of the misunderstandings which is also common among many supporters of the concept: They seem to see relative poverty as an attempt to measure destitution, or physical deprivation. They then reject it because of its unsuitability for this task. However, as explained in Chapter 2, relative poverty was not originally meant to be a measure of destitution. The concept only came up once destitution had practically disappeared in the UK. With this in mind, high figures in rich countries need not be implausible. A statement like '18% of the British population live in poverty' is only implausible when it is interpreted to mean '18% of the British population live in physical hardship', or '… lack basic essentials like food or clothing'. But a look at the history of ideas behind poverty measurement (see Chapter 2) shows that this is not what relative poverty was initially meant to be about. When the statement is interpreted to mean '18% of the British population do not have the means to fully participate in contemporary British society', or '…do not have the means to engage in all the consumption habits that are customary in contemporary Britain', there is nothing per se implausible about it.

It is true that in practice, relative poverty measures have inadvertently come to be used as if they were measures of destitution and material hardship, with the attribute 'relative' being misinterpreted to mean 'less severe' rather than 'relative to average incomes'. Chapter 2 has shown that poverty campaigners frequently, and erroneously, use the figures in this way. But the critics of relative measures are falling into exactly the same trap, because their criticism focuses on the misunderstanding rather than the original meaning. And while the critics are right to highlight the discrepancy between the common interpretation of relative figures and low-earners' actual living standards, their criticism does not invalidate relative measures, because it does not invalidate the original idea behind them. If poverty is interpreted as the inability to participate in a society's customary consumption habits, the above points of criticism do not hold. Today's low-earners may indeed have *"many privileges that Louis XIV did not have"* (Clark et al, 2006, p. 53), but this tells us nothing about their ability to participate in contemporary British society. If the poverty line is meant to represent the cost of social participation, and if that cost can rise over time as new consumption habits become the norm, there is no reason why the poverty line should not also rise over time. The purpose of raising it would then not be "*to keep the numbers up"* (Saunders, 2009, p. 14), but to keep the poverty line relevant.

Neither does it have to be a contradiction that some Eastern European countries have low relative poverty figures, despite absolute living standards being much lower than in Western Europe. Relative poverty figures for Eastern Europe are meant to measure whether low-earners in these countries are able to participate in *their own* societies – not whether they are able to emulate Western consumption habits.

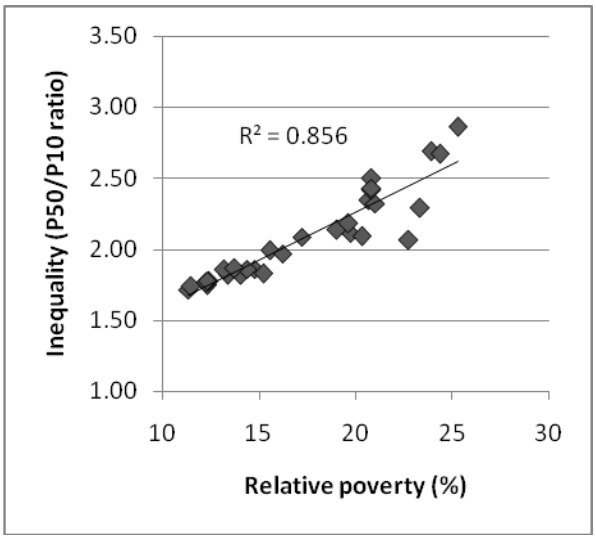
Ultimately, most conventional critiques of relative poverty boil down to a single one: that relative poverty is a measure of inequality. Saunders (2009, p. 5) expresses this in the following way:

"[T]he idea that poverty is relative – that you are poor if most other people can buy things you cannot afford – confuses poverty with inequality. Having less than other people have does not necessarily mean you are poor; it rather indicates unequal shares".

The problem with this criticism is that it only concentrates on a statistical property, while, again, ignoring the original theory behind the measurement. In purely statistical terms, it is, of course, true that relative poverty indicators measure inequality in the bottom half of the distribution. This follows from their mathematical definition, and it can also, unsurprisingly, be seen in the results. Figure 5.1 shows this relationship for a cross-country sample of 30 OECD-countries in a snapshot perspective, and Figure 5.2 shows the same relationship for a within-country time series covering five decades in the UK.[20]

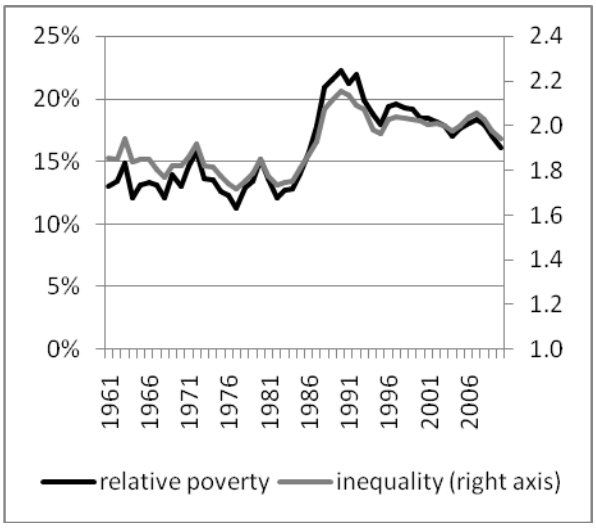
[20] In both cases, relative poverty rates have been measured against the conventional threshold of 60% of the median, while inequality in the bottom half has been measured by the ratio of median incomes to incomes at the 10th percentile (P50/P10).

Figure 5.1 Relative poverty rates vs. inequality (P50/P10) in 30 OECD countries, mid-2000s



-based on data from OECD (2008)

Figure 5.2: Relative poverty rate vs. inequality (P50/P10) in the UK, 1961-2010



-based on data from IFS (2012)

Nevertheless, it is not true that adherents of relative measures 'confuse' poverty with inequality. Rather, they subscribe to a set of very specific assumptions, and within these assumptions, inequality *is* poverty. It is expressed, for example, in Townsend's (1962, p. 225) statement:

"They [the members of a society] *are rich or poor according to their share of the resources that are available to all"*.

Or in Fuchs' (1967, pp. 88-91) words: *"When most Americans have a great deal, those that have much less are poor, regardless of their absolute level of income* [...] *When we talk about reducing or eliminating poverty, we are really talking about changing the distribution of income"*.

Clearly, these authors did not 'confuse' poverty with inequality. Rather, they *understood* poverty as inequality. The same is true for present-day adherents of relative measures, which is why they reject the conventional critique:

"[I]t has been argued that because median incomes rose sharply during the period of rapid growth from the late 1990s, tackling poverty has become more difficult because the poverty line has been rising rapidly along with the median. ***But this is the point of a relative poverty measure.*** *It reveals that if the poorest are falling behind the rest during a period of rapid prosperity growth,* ***they may be absolutely better off but they are still relatively poorer****"* (Lansley, 2010; emphasis added).

The conventional critique of relative measures has failed to engage with these assumptions. It is not sufficient to critique statistical properties of relative measures, or the widespread misunderstanding of these measures, without addressing the original idea. This chapter will evaluate relative measures from an entirely different angle. It will enquire whether they achieve what they are meant to achieve.

5.2 Separating theory from measurement

Chapter 2 has documented the 'rediscovery of poverty' of the 1950s and 1960s, the change in the understanding of poverty which preceded the adoption of the new relative poverty measure. This was not a seamless flow of events. There was a considerable time lag between the change in the understanding and the change in the measurement.

Fundamental criticism of the BSA method already emerged just years after the publication of Rowntree's last poverty study. Townsend's (1954) paper 'Measuring poverty' can be seen as an early draft of what would become the new understanding of poverty. In this paper, the idea of poverty as a context-specific and dynamic concept was already recognisable:

"In considering the spending habits of poorer people, it seems that due regard must be paid to the conventions sanctioning membership of their community [...] and to the standards encouraged by advertisers, the press, the B.B.C. [sic] *and the Church"* (ibid., pp. 133-134).

What follows is a reflection about new ways of measuring poverty, but the paper does not yet contain anything resembling a relative measure. It proposes a reworked version of what can still be considered a BSA, and a measure with a poverty line based on the rate of basic income replacement benefits (ibid., pp. 134-136). The rethinking of poverty had begun, but there was still no statistical proxy for this idea which resembles contemporary relative measures.

About a decade later, Townsend's (1962) paper 'The meaning of poverty' presented a much more refined verbal description of the idea of relative poverty. This paper also contains an early description of what would become the new measurement:

"Perhaps more use might be made of the concepts of 'average disposable income per head', or 'average household income' for different types of household. A possible definition of poverty might be developed on the basis of measuring how many households or families of certain types have a total income of less than, say, 50 per cent or 66 per cent of the average" (Townsend, 1962, p. 223).

But it remained at this stage. The paper is not a forceful endorsement of a poverty line pegged to average incomes. It is a general reflection on how poverty ought to be understood, and on what a poverty measure ought to do. The above passage represents no more than a tentative proposal.

This proposal remained without practical consequences for the time being. The subsequent empirical study 'The poor and the poorest' (Townsend & Abel-Smith, 1965) contained another verbal description of the new understanding (ibid. pp. 16-20), but it ultimately used a poverty line similar to the one Townsend had described in 1954. This sequence shows that by then, a fully worked out theory of relative poverty had emerged, but poverty lines pegged to national average incomes were not yet part of it.

The idea and the measurement did not evolve jointly. The former had been around well before the latter, and had gained traction without it. This distinction is not just a matter of sequencing. In hindsight, it may seem as if the rethinking of poverty in the 1950s and 1960s

had set poverty research on a one-track road, which could not have led anywhere but to the adoption of relative measures. Hence, the poverty literature generally devotes little attention to the question of when and how exactly the new understanding translated into a new measurement. The change in the understanding is explained, and the adoption of a relative measure is then treated as a technical detail which followed automatically. An example is the description by Glennerster (2004, p. 88):

"There was controversy about the report [by Townsend and Abel-Smith from 1965] *and criticism particularly of the comparisons with 1953/54. National Assistance rates had risen in real terms since 1953, critics said, so of course the numbers of poor had risen. […] To meet these criticisms later official measures were to use income relative to a national mean or median income – 40 percent, 50 per cent of the mean income or more recently 60 percent of the median.* ***These technical arguments aside****, […]"* [emphasis added].

But are these merely 'technical arguments' which can be left aside? A closer look at the verbal description, from the years when the new understanding of poverty was not yet connected to a statistical measurement, does not warrant such a deterministic view. As described in Chapter 2, what characterised this new understanding of poverty was the notion that needs were socially rather than physically determined. Therefore, they were seen as dynamic and context-specific, rather than static and universal. But this idea did not necessarily require a poverty line that is pegged to national average incomes. What it did require was a poverty line that bore some relationship to consumption-related social norms, and which could evolve over time as these norms evolved. The same idea could potentially have been operationalised in other ways. Relative poverty lines are not the only way of operationalising it, and in fact, it is not even clear whether relative poverty lines are an especially suitable way of operationalising it. Is the cost of social inclusion a linear function of national median incomes? Supporters of relative measures provide no evidence that it is, and no explanation why it might be. They may have convincingly made the case that poverty lines have to be rooted in social context, but from then on, they have simply taken the leap of faith that pegging them to national average incomes makes them so. But is 'context-specific' the same as 'relative', in the sense of 'relative to the national average'? This is the question that this chapter seeks to address. It accepts the notion that needs are socially determined and context-specific. But it does not a priori accept the notion that the cost of social inclusion mechanically follows the national median or mean.

5.3 The problem of defining the reference territory

When relative measures were first devised, there was no way of knowing how exactly individual perceptions of what represents an 'adequate' living standard were affected by the living standards of others. Today, such information could be obtained from the literature on 'Subjective Wellbeing' (SWB). SWB-studies investigate the determinants of self-reported life satisfaction, or sometimes a narrower subset such as 'job satisfaction' or 'consumption satisfaction'. They do this by using respondents' self-assessed SWB-score as the dependent variable, and expressing it as a function of a set of potential explanatory variables. The latter typically include the respondents' age, family status, employment status, health status etc. Most studies also include fixed time effects and individual random effects. The latter variable allows these studies to control, to some extent, for factors that are constant over time, but specific to the individual, especially unobservable personality traits. In this way, the studies can account for the fact that some respondents will simply be of a more 'cheerful' disposition than others, and that SWB scores will therefore not be mechanistically determined by any set of control variables. SWB studies vary in sophistication: Many are limited to a simple OLS method of estimating coefficients, while a few use more sophisticated techniques to account for issues like endogeneity and reverse causality. (For example, an 'optimistic' attitude could manifest itself in a high SWB score, but it could also contribute to an individual's success in the workplace, eventually leading to a higher income. The causality would then run both ways, rather than just from income to SWB.)

SWB studies almost always include both the respondent's own income, and the income of an imputed reference group, the latter either as a money amount or as a percentage of the respondents' income. The idea is to evaluate, among other things, whether SWB is more responsive to absolute or to relative income. Do people evaluate their living standards mostly on their own terms, or in comparison to a benchmark? What is the net effect on SWB if respondents' income rises (falls) in absolute terms, but falls (rises) relative to the benchmark level?

The results for variables such as age, health and family status are not of interest for the purposes of this chapter. But they can be treated a control variables, allowing an assessment of how SWB is affected by absolute and relative income provided other factors are held constant. Of course, SWB research is not, and cannot be an exact science. The very

idea that SWB is measurable, and expressible in such a mechanistic way remains controversial. Quite apart from general problems with the overall approach, these studies also suffer from a range of statistical shortcomings on a more practical level (see Johns and Ormerod, 2007, for a discussion). SWB studies do not permit strong conclusions, and are certainly not intended to serve as a gold standard here. At best, they can identify very general patterns. Yet a few findings from the SWB literature are so consistent that they cannot be entirely ignored.

Can the SWB literature hold any lessons for poverty research? Potentially, yes – as long as a number of caveats are kept in mind. If it turned out that income-related variation in SWB is largely determined by relative (absolute) incomes, with absolute (relative) incomes explaining only a minor share, then this would represent an argument against absolute (relative) poverty measures. SWB studies cannot 'prove' or 'refute' any theory of poverty. There are too many competing explanations for any given SWB data pattern. But the SWB results can be more easily compatible with one poverty theory than with another. It cannot prove, but it can lend support; it cannot refute, but it can cast doubt. In this sense, a fusion of poverty research and SWB research can be useful.

Relative poverty studies are based on the assumption that an increase in overall living standards raises the cost of social inclusion, as well as expectations of what constitutes an 'adequate' standard of living. If this assumption holds, then it should manifest itself in the SWB results. A decrease in low-earners relative incomes should then lead to a decrease in SWB, even if it coincides with an increase in absolute incomes. The higher average living standards should have raised the social participation costs, so that their income, even if higher in absolute terms, 'buys less social inclusion'. The change in median incomes, in this perspective, could be thought of as the 'social participation cost inflation rate'.

Moreover, in order to be compatible with a theory of relative poverty, relative income would have to be more important to those at the bottom of the income distribution than to those further up. In order to lend support to a relative poverty theory, SWB research must do more than show that relative income is a determinant of SWB. It must show that relative income is a determinant *for a particular reason*. For example, it could turn out that the SWB of middle income-earners is negatively affected by income differences vis-à-vis top earners. But this would be a kind of inequality which has nothing to do with relative poverty. In this case, the negative impact could be explained by considerations of status competition,

fairness considerations, a perception that the lead enjoyed by top earners is undeserved, or simply by envy. Relative poverty is not concerned with either of these. It has nothing to do with envy, and it has nothing to do with whether a given distribution is perceived as 'just' or 'fair'.

Relative poverty is not about income comparisons, but about social exclusion. Income comparisons can take place at any point in the income distribution, even between the top and the very top. But if the impact of relative income on SWB was especially pronounced at the bottom of the distribution, it would suggest that something else apart from mere income comparisons is taking place. This could then be the independent effect of being cut adrift from the ordinary consumption patterns of society, as opposed to just having less than somebody else.

SWB-studies suggest that interpersonal comparisons take place and that, other things equal, falling behind a reference group has a negative impact on SWB. The variable which measures relative income – the ratio of the respondent's income to the imputed peer group's income – is usually statistically significantly. Its magnitude is often in the same region as that of the respondent's own income. The literature does not conclusively answer the question whether absolute or relative income is a stronger determinant of SWB, but it is safe to say that both matter. This could be compatible with a notion of poverty that is somewhere in between a purely relative and a purely absolute one.

However, there is one crucial piece of information which cannot be gathered from the SWB literature: It cannot establish who exactly constitutes the benchmark group whose income level is supposed to be the reference point. A few SWB studies have assumed that the reference group is made up of the inhabitants of the national territory, and have therefore taken the national average income (or a close equivalent) as the benchmark income (Easterlin, 1995; the UK model in Blanchflower and Oswald, 2004). Implicitly, conventional relative poverty studies do the same: When poverty lines are pegged to the national median, the national territory is implicitly assumed to be the domain over which customary consumption habits are formed.

But many authors have assumed that benchmarking takes place on a much narrower geographic scale. In some SWB studies, the reference group is defined at the level of the region (Ferrer-i-Carbonell, 2005; the US model in Blanchflower and Oswald, 2004), the municipality (Luttmer, 2004; Clark and Oswald, 1996), or even the vicinity (Kuhn et al,

2008). It is not clear at all which of these levels is more appropriate, because no clear hierarchy between these models is recognisable. There is no indication that one of them is better able to achieve unbiased estimates than the others. Whether a benchmark defined at the national level is superior to a benchmark defined at the regional level, or vice versa, is an unresolved question. There is evidence that income comparisons vis-à-vis some benchmark takes place, but it is not clear what that benchmark is. Relative income matters, but the question 'relative to what?' remains unanswered. As far as the formation of consumption-related norms and expectations is concerned, there is nothing special about the national level.

If this is the case, then neither is there a particular reason why relative poverty standards have to be defined at the national level. In practice, almost all studies on relative poverty peg the poverty line to the national median, but this is not part of the definition of relative poverty. Indeed, when the idea of a relative measure was initially formulated, the relative-to-what question was still left open:

"Our general theory, then, should be that individuals and families whose resources, over time, fall seriously short of the resources commanded by the average individual or family in the community in which they live, ***whether that community is a local, national or international one****, are in poverty"* (Townsend, 1962, p. 225; emphasis added).

It is not for reasons inherent in the theory that de facto, 'relative' has come to mean 'relative to the national average'. It is merely a consequence of administrative arrangements: The key social policy decisions, too, are generally taken at the national level (Eurostat, 2008, p. 39). However, if the case for a relative measure is made in on the grounds of context-specific social norms, then the geographic area over which this measure is specified must be selected on the same grounds – it must approximate the territory where these social norms apply, independent of political or administrative technicalities. Competences for social policy can be relocated upwards (e.g. in the course of European harmonisation) or downwards (e.g. in the course of devolution or 'localism'), but this would not change the way in which customary consumption habits are formed.

Are these considerations relevant in practice? The answer can be found by looking at the few poverty studies which have experimented with poverty indicators defined over alternative territories. Rainwater et al (2003) as well as Kangas and Ritakallio (2004) show regional relative poverty rates measured against poverty lines based on regional, rather

than national medians. In countries with substantial regional differences in living standards, this has a large impact on the poverty rates of regions with an income level far above or far below the national average. As shown in Table 5.1, when switching from a national to a regional poverty line, relative poverty soars in the more prosperous and plummets in the less prosperous regions.

Table 5.1: Relative poverty rates with national and regional poverty lines

Poverty line → / Country/ Region ↓	60% of national median	60% of regional median
Italy		
Milan	7.3%	14.5%
Sicily	46.6%	27.3%
Spain		
Catalonia	6.7%	17.5%
Andalucía	27.3%	17.9%
France		
Greater Paris	10.5%	18.7%
Calais	23.8%	13.9%
Ireland		
Dublin	15.0%	20.6%
West Ireland	25.4%	11.5%
UK		
South East England	14.6%	20.4%
Northern Ireland	29.3%	16.9%
USA		
New Jersey	13.6%*	21.8%*
Arkansas	25.7%*	14.1%*

-based on data from Kangas and Ritakallio (2004) and Rainwater et al (2001)

*: child poverty rate only, threshold = 50% (not 60%) of median

The argument made here is not that the regional level is more appropriate for setting poverty lines than the national level. The argument is that it is unknown what the 'correct' reference territory is, and yet, relative poverty rates are highly sensitive to this choice. They are non-robust, in the sense that changes in the geographical boundaries which are entirely compatible with the overall theory can completely overturn the results.

To illustrate the effect of a change in boundaries in the other direction – merging neighbouring countries rather than splitting existing ones – Table 5.2 shows relative poverty rates in three hypothetical countries. The examples have been selected in such a

way as to make them fully compatible with a relative conception of poverty: The selected countries have either a shared history or mutually intelligible languages, and cannot be considered entirely separate societies as far as social norms and the concomitant consumption habits are concerned. The figures are only order-of-magnitude approximations.[21]

The first example shows a hypothetical merger of Austria with Hungary into Austro-Hungary, which produces a new median income and hence a new poverty line. Against this poverty line, relative poverty would virtually disappear in Austria, and about quadruple in Hungary. The second example shows a merger of Norway and Sweden into 'Nordland', a less extreme example because the two constituent countries are less far apart economically. Still, this merger would result in a notable increase in relative poverty in Sweden. Finally, merging Spain and Portugal into 'Iberia' results in a large increase in the Portuguese relative poverty rate.

Table 5.2: Relative poverty rates in three hypothetical countries

	Median income in PPP-$, 2005	Poverty line in PPP-$ (60% of median income)	Poverty rate
Austria	25,100	15,100	13%
Hungary	9,800	5,900	12%
'Austro-Hungary'	15,700	9,400	26%
Austria as a region of 'Austro-Hungary'	25,100	9,400	3%
Hungary as a region of 'Austro-Hungary'	9,800	9,400	46%
Sweden	20,700	12,400	11%
Norway	26,600	16,000	12%
'Nordland'	22,600	13,600	14%
Sweden as a region of 'Nordland'	20,700	13,600	16%
Norway as a region of 'Nordland'	26,600	16,000	9%
Spain	18,000	10,800	21%
Portugal	12,300	7,400	21%
'Ibera'	16,700	10,000	21%
Spain as a region of 'Iberia'	18,000	10,000	18%
Portugal as a region of 'Iberia'	12,300	10,000	36%

-data from Niemietz (2010)

[21] They are based on OECD data for income deciles instead of percentiles, so the simplifying assumption was made that, within each decile, the income difference between two adjacent percentiles is constant.

The emphasis of this numerical exercise is *not* on the fact that the relatively poor of one society can be well-off by the standards of a different society. That is as obvious as it is irrelevant. Relative poverty is concerned with low-earners' ability to participate in *their own* society, not with how they fare by the standards of some distant, unrelated society. This is why conventional critiques of relative measures have often missed the point. An example is the statement by Clark et al (2006, p. 53): *"The homeless in Washington, DC may live quite poorly by American standards, but by the standards of India, they are rather well off[...] Their medical attention in particular is better than anything available until very recently."* Adherents of relative measures would justifiably reject this comparison as flawed. They would point out that the poverty of the homeless in Washington DC consists of the fact that they are unable to participate in mainstream American society. Their ability to participate in their own society does not depend on how their living standards compare to those observed in distant parts of the world. But if the comparison of living standards across entirely unrelated societies represents one extreme, then nation-centred relative poverty measures represent the opposite extreme, and the failure of one extreme does not validate the other. In a relative poverty framework, it is effectively assumed that consumption-related norms are uniform within a country, and then stop abruptly at the national border.

The Austro-Hungary example is somewhat extreme, but it is not an isolated outlier. The Czech Republic, Slovakia and Slovenia also record some of the lowest relative poverty rates in the world. The possibility that consumption-related norms in these countries might by affected by the norms in their much more prosperous Western neighbour countries, with which they maintain close economic ties, is not considered in relative poverty studies (see e.g. UNICEF, 2005; UNICEF, 2007).

To repeat: The case made in this subchapter is not that the national level is the 'wrong' level for poverty measurement; it is not claimed that the regional or the supranational level is in any way superior. The argument is that it is *unknown* which level is the most appropriate, and that small, plausible changes to the boundaries can have a large impact on the results. UNICEF (2007, p. 6) argues that "*in today's OECD nations the cutting edge of poverty is the contrast, daily perceived, between the lives of the poor and the lives of those around them."* But if plausible changes to the definition of who exactly 'those around them' are can fundamentally alter the results, then this statement cannot be translated into a robust indicator.

5.4 The problem of defining the social reference group

SWB studies differ in their specification of the territory for deriving the benchmark income. But whichever territory they specify, they rarely assume that the benchmark group is made up of *all* inhabitants of this territory. It is much more common to assume that reference groups consist of individuals who share some socio-economic characteristics. In other words, they assume that there is no single, common reference group, whose consumption habits define 'the norm' for all of society.

McBride (2001) uses a model in which individuals benchmark their income against the average income of their own age group, defined as the respondent's age plus/minus five years. Thus, benchmarking is assumed to take place in comparison to age-mates, not society as a whole. There are now a variety of benchmark groups – as many as there are age groups – rather than a single one. In addition, the author notes that the intensity of benchmarking varies over the lifecycle, with absolute income being more important in some and relative income being more important in other stages of life. Neither is the intensity of benchmarking uniform across the income distribution. It seems to be weaker at the lower end, where absolute income is a greater concern than relative income. This is difficult to reconcile with a relative understanding of poverty.

Ferrer-i-Carbonell (2005) takes a similar approach, but includes education as an additional variable. In her model, individuals benchmark their income vis-à-vis those in the same age group who also have a similar education level. With the inclusion of this additional variable, the number of reference groups becomes larger yet.

Van de Stadt et al (1985) define an even more 'tailor-made' reference group, consisting of people of the same age group, education level and employment status. Clark and Oswald (1996) go a step further and specify a model in which the comparison group consists of people of the same age group, education level, employment category, and industry.

There is, again, no discernible hierarchy between those models in terms of their ability to deliver unbiased, consistent estimates. It is not clear whether the specification of more and more tailor-made reference groups is sensible, but neither is there a reason to assume that there is one single, common reference point for consumption-related norms. People in different circumstances differ in the living standards and consumption habits they consider 'the norm'.

The findings of Fafchamps and Shilpi (2008) further complicate this picture. They show that the process of reference group formation is not uniform within a country or over time. It varies with the extent to which a locality is integrated into wider patterns of market exchange, and thus with exposure to geographically distant people's lifestyles. The intensity of benchmarking against a reference standard also varies with the composition of the consumption basket. For some goods, respondents' perceptions of what constituted acceptable standards depended a lot on what was available to others around them. For other goods, respondents were rather indifferent to what others had. For example, most respondents tolerated differences in the standard of clothing, but not in the standard of healthcare.

In short, there is no reason why the cost of social inclusion should be a fixed fraction of median income or, more generally, why median income earners should be treated as the standard setters of social norms. Whether a given living standard is perceived as adequate does not necessarily depend on the distance to the national median, but rather, on the distance to some highly personal, unobservable peer group. Minimising that difference, however, is not a feasible policy objective. If benchmark groups are defined by common socioeconomic characteristics, their members will often be in the same income tax bracket and/or qualify for the same income transfers. Traditional redistributive instruments will therefore not necessarily affect within-group income differences.

It is important to note that the problem of reference group specification cannot be easily overcome. In the context of SWB models, terms like 'comparison' or 'benchmarking' must not be taken literally. They might include, but are by no means limited to conscious, deliberate comparisons. If they were, one could overcome the problem by simply conducting a survey, and asking people who they compare themselves to when evaluating their living standards. But in the context of SWB studies, this is not an option, because this is not necessarily the kind of benchmarking that these studies investigate. A respondent may never consciously ask themselves 'How does my income compare to the typical incomes in group X?', but changes in the incomes of group X could still have an impact on what kind of living standard that respondent perceives as 'normal' or 'appropriate'.

5.5 The problem of defining the reference timeframe

Relative poverty standards count increases in average living standards against material gains enjoyed by the poor, on the grounds that these increases raise consumption-related norms. They also treat this offsetting as taking effect instantaneously. Relative measures do not account for the dimension of time in the formation of norms and expectations. Effectively, the assumption is that what people perceive as a 'normal' standard of living is a function of the standards they *presently* see around themselves. There is no account of what they experienced in the recent past, what the reference level was in the recent past, or what they expect to experience in the near future.

The same is true for virtually all SWB studies, which is why very little is known on the role of time in the formation of consumption norms and the catching-up of expectations. SWB-studies, like poverty studies, are set in a timeless world with no past and no future. But there are no intrinsic reasons for this, and a few exceptions do exist. Aronsson and Johansson-Stenman (2008) develop a model in which respondents benchmark their income against three different reference levels. Apart from the reference group's present income, its past income is also included, as is the respondent's own past income. The study is too tentative to permit any conclusions about the relative importance of each, but to say the least, there is no reason to reject the notion that hindsight-benchmarking takes place and affects current perceptions.

By implication, this also means that there is no reason why poverty studies have to be set in a timeless world. It would be entirely coherent within the relative poverty framework to adopt a notion of 'inter-temporal relativity'. Callan et al (1998), for example, state the case for the use of relative measures in the following way: *"**[O]ver time**, increases in general living standards will come to be fully reflected in expectations about what is sufficient to participate fully in society"* [emphasis added]. Current relative indicators, however, omit this intertemporal aspect. They do not allow for a time lag that has to elapse before a rise in overall living standards has translated into changed perceptions of what is a 'typical' lifestyle. They assume that this adjustment always takes place instantaneously. If they did take time into account, they would have to differentiate between societies that record similar living standards at present, but that have reached their current positions through different time trajectories.

The experience of Ireland during its high-growth period is a case study which reveals the limits of the 'time-blind' approach, as even adherents of relative poverty measures have acknowledged. UNICEF (2005, p. 7), for example, notes: *"In the 1990s […] Ireland saw sustained economic growth that brought a near doubling of average incomes. Clearly, child poverty has in one sense been reduced. But relative poverty remained largely unchanged."* Hills (2004, p. 42) explains this phenomenon, which he labels the 'Irish Paradox', as follows: "*The poor were a lot better off in real terms than they had been, but relative poverty still rose. This jarred with public perceptions of what poverty constituted, since it had not adjusted upwards as fast as average living standards."*

Still, the tendency among many poverty researchers has been to treat this phenomenon as a mere *"short-term quirk"* (Stewart, 2010). The term 'Irish paradox' already implies that the phenomenon was unique to Ireland. But while the Irish growth rate was indeed unique in magnitude, the basic logic is universal: The higher the growth rate of low-earners' income, the shorter the time period that has to elapse before they reach current median levels.

An intertemporal measure which included the median of a previous generation as a reference point would not be compatible with the theory of relative poverty: A different generation would be seen as akin to a different country. Contemporary low-earners live here and now, and if they are to avoid poverty, their income has to enable compliance with the consumption norms of here and now. Proponents of relative measures rightfully reject the benchmarking against a distant and unrelated point in time, such as *"the people classified as poor in the United States today have many privileges that Louis XIV did not have"* (ibid.). However, this does not automatically validate the opposite extreme of excluding the dimension of time altogether.

A version of relative poverty which included an intertemporal dimension could provide very different results. The greater the weight it attached to past incomes, the more it would respond to changes in low-earners absolute income – *without* turning it into a measure of absolute poverty. It would still be a firmly relative measure, which would differ from conventional relative measures only insofar as it would answer the 'relative to what?' question differently. To give an example: In the mid-2000s, Ireland, the USA and New Zealand recorded very similar rates of relative poverty. These countries were similar in one particular dimension of relativity: the income gap between contemporary low-earners and contemporary median earners. And yet they differed radically on an intertemporal

dimension of relativity, for example, relative to domestic median incomes in the mid-1980s. Low-earners in the USA and New Zealand had experienced only modest improvements in their incomes since then, which meant that they were still a good distance away from their countries' mid-1980s median. Irish low-earners, in contrast, had reached that level already. Under a relative measure with an intertemporal dimension, Ireland would have recorded a lower poverty rate than the USA and New Zealand. The three countries looked similar in terms of 'snapshot inequality', but the rapid improvements in the living standards of Irish low-earners would be counted as 'intertemporal equity'.

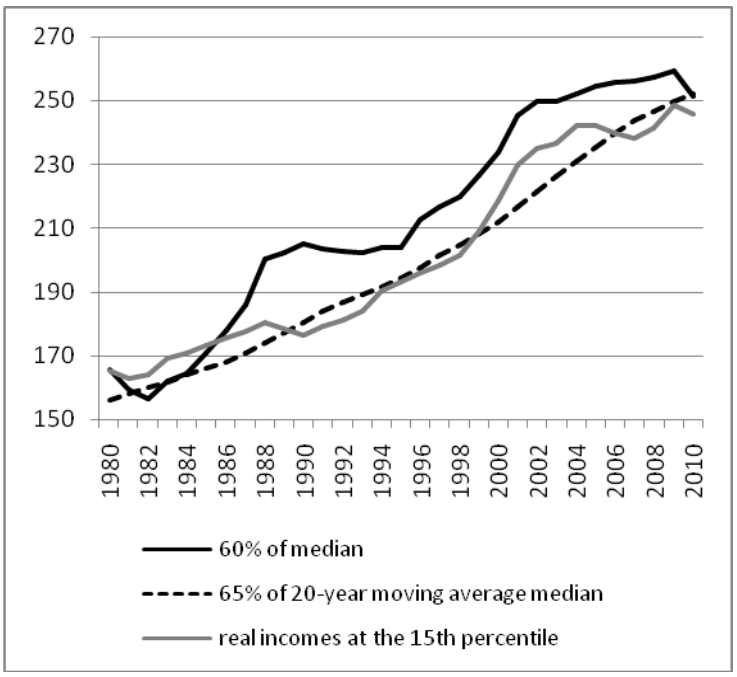
Figure 5.3 shows a calculation for the crudest possible form of intertemporal relativity: It uses a relative poverty line defined as 65% of a 20-year moving average of median income. Thus, the poverty line for 1980 (1981, 1982 …) is the average of the median incomes recorded in all the years between 1961 (1962, 1963 …) and 1980 (1981, 1982 …). The purpose of this calculation is a purely illustrative one; the figures themselves are entirely arbitrary. There is no reason why 20 years should be the 'correct' reference period, or why 65% should be the 'correct' threshold. Nevertheless, the calculation provides a glimpse of what the addition of an intertemporal dimension into relative poverty measures would look like.

The solid black line shows the conventional weekly relative poverty line (for a childless two-adult household), expressed in 2010 prices. The dotted black line shows the intertemporal relative poverty line. The threshold has been chosen in such a way that the two start from about the same position (hence, the choice of 65%), to ensure that the two methods compare like with like. The grey line shows real incomes at the 15th percentile of the distribution.

The evolution of conventional relative poverty has already been described in subchapters 2.4 and 3.1: It crossed the 15% mark in 1986, climbed well above that level in subsequent years, moderated slightly later on, but never reverted back the pre-1980s levels. This trajectory has defined the conventional 'poverty narrative' described in Chapter 2. The evolution of intertemporal relative poverty does not completely overthrow this narrative, but it differs in subtle yet important ways. First of all, the explosion of poverty in the 1980s is not repeated. Poverty only climbs above the 15%-mark in 1990, and even then not by very much. It falls below that level again in 1999, to rise above it once more at the onset of the present recession. The deviation between conventional and intertemporal relative

poverty is easily explained. There is no explosion in relative poverty in the 1980s, because the fast growth in median incomes recorded between 1982 and 1988 does not instantaneously translate into a steeply rising poverty line. When the poverty rate rises above the 15%-mark eventually, it does not happen for the same reason as under the conventional relative measure: Under the intertemporal approach, it happens because incomes in the relevant region fall in absolute terms, and then take time to recover while the poverty line continues to grow. Something similar happens during the financial crisis and the subsequent (and at the time of writing, still ongoing) recession.

Figure 5.3: An intertemporal relative poverty line for the in the UK, 1980-2010, £ per week, 2010 prices



-author's calculation, based on data from IFS (2012)

The intertemporal poverty line developed here is still clearly a relative poverty line. It is just as firmly pegged to median incomes as a conventional relative measure. Nevertheless, in practice, it shares some commonalities with an absolute measure. It is not decoupled from the median, but it is largely decoupled from the median's short-term fluctuations, which it neutralises through averaging. Therefore, it does not suddenly jolt up in periods of fast growth, and it does not drop in periods of downturn.

Under an intertemporal relative poverty line, the cost of social inclusion ultimately rises with the median in the long term, but without repeating every one of the latter's jumps and jolts. This is not quite the same as the idea of intertemporal relativity described above: In

Figure 5.3, a permanent increase in inequality would still increase relative poverty, albeit with a time lag. When intertemporal relative poverty is defined by the pace it takes for current low earners to catch up with current median earners over time, then even a permanent increase in inequality need not raise poverty, as long as it is accompanied by a rise in trend growth. But for a period of no more than thirty years, the two can be seen as similar enough.

An intertemporal measure would also eliminate another anomaly of conventional relative measures: The fact that relative poverty regularly increases during recessions. In the UK, this has happened during the first oil crisis of the mid-1970s, the second oil crisis of the late 1970s and the prolonged recession which followed it, the recession of the early 1990s (Muriel & Sibieta, 2009), and the present recession (Brewer et al, 2011). This pattern occurs because market incomes are more volatile than state transfers, at least during recessions. Median incomes consist mostly of market incomes, with incomes at the lower end consist mostly of state transfers. Hence, during recessions, median incomes fall faster than bottom incomes, a development which lowers relative poverty.

Taken together, this shows that relative measures produce a number of anomalies which are difficult to justify even within their own set of assumptions. The theory of relative poverty holds that the cost of social inclusion rises over time with overall living standards, but this does not mean that any increase in median incomes immediately offsets gains made by the less well-off. Yet this is what happens under a relative approach. Neither is it explicable within the theory why poverty rates should fall during recessions, as they regularly do. Some adherents of relative measures have acknowledged the existence of these anomalies, but they have tried to dismiss them as occasional aberrations which can be ignored for practical purposes. Stewart (2010) calls the rising relative poverty rates in Ireland, which arose amidst spectacular income growth for the less well-off, as a *"short-term quirk"* (Stewart, 2010). Hills (2004) called it the 'Irish Paradox', implying it was an idiosyncrasy of one country. By the same token, Lansley (2010) calls the phenomenon of rising poverty rates in recessions a *"statistical quirk"*.

But attempts to downplay the anomalies produced by relative measures as mere 'quirks' are not convincing, given how frequently these supposed quirks occur. There have been four major recessions in British post-war history (counting the recent 'double-dip' as one single recession), and relative poverty rates fell by various percentage points in every one

of them. At the same time, relative poverty rates showed their strongest increase during a period of prolonged above-trend growth (the late 1980s), and something similar happened during the latter half of the 1990s. Such results are not defensible within the assumptions of relative poverty measurement, because neither is there a reason why the cost of social participation should suddenly drop during a recession, nor why it should immediately jolt up during a boom period. Yet this pattern – falling poverty during recessions, rising poverty during booms – occurs on a very regular basis, which is not surprising given the differences in the composition of incomes at different points of the distribution.

In summary, relative measures are, again, non-robust to modifications within their own framework. They are highly sensitive to plausible changes in the reference period, a change which is fully compatible with the theory of relative poverty. The critique developed in this subchapter has been, again, a critique 'from within', which has evaluated relative measures by their own standards, accepting the assumptions on which they are based as given.

5.6 The problem of defining the median elasticity of the poverty line

Relative poverty measures are based on the implicit assumption that the cost of social participation rises with the national median, which, in itself, is already a leap of faith. But the implicit assumption is stronger than that. It also holds that the cost of social participation rises at exactly the same pace as he national median. Conventional relative poverty measures are a fixed fraction of median incomes, so if the median rise by p%, the poverty line automatically rises by the same p%. One could call this relationship the 'median elasticity of the poverty line' (MEP). Under conventional relative measures, the MEP is always equal to 1 (and under conventional absolute measures, it is always equal to 0).

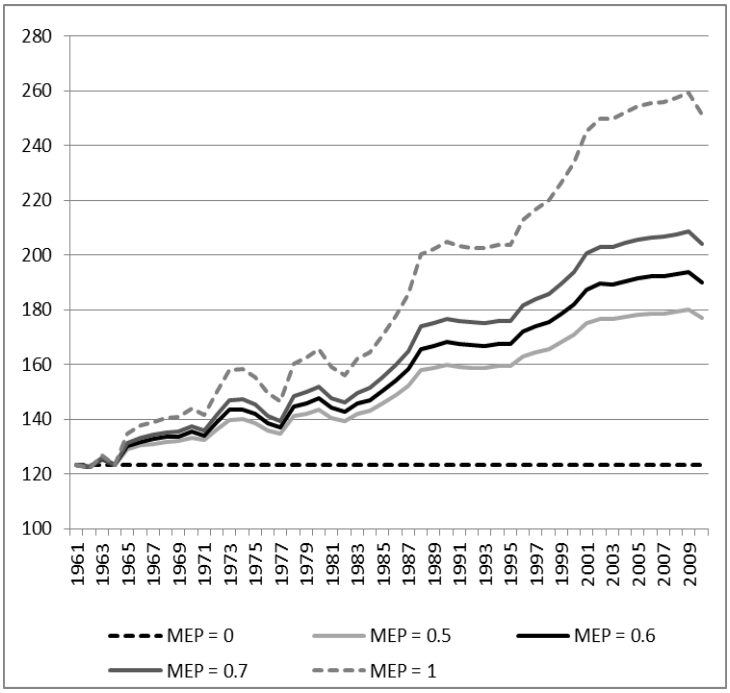
There is no theoretical reason why relative poverty measures should have an MEP of 1. The theory holds that the cost of social inclusion rises with the median, but not that it rises in exactly the same proportion. There is little research on how to determine a plausible figure for the MEP, but the so-called 'Leyden Poverty Line' (see Wolff, 2009, pp. 96-99), as well as the research by Madden (2000), could be interpreted as attempts to do so. The Leyden Poverty Line is derived from the survey data used to produce a majoritarian subjective

poverty line. Households are asked what they consider the minimum amount needed to live a decent life in their society, and the responses are plotted against the respondents' income. For US data, a gradient of about 0.6 results: If people's income increases by 10%, their perception of what constitutes a necessary minimum amount increases by 6%.A disadvantage is that respondents have not been followed for long periods of time, so it is unknown how this relationship changes as all incomes rise over time. But it is currently the next best thing to an estimate of the MEP.

Madden (2000) uses a similar logic, but looks at actual purchasing decisions instead of relying on survey responses. He derives the income elasticity of demand for several necessities, taken from a Material Deprivation list. The average of these income elasticities can also be interpreted as an approximation of the MEP. The author finds a MEP between 0.5 and 0.7, depending on the weighting. The same disadvantage that applies to the Leyden Poverty Line applies to Madden's weighted average of income elasticities as well: The figures refer to relatively short time periods, so it is unknown whether they would also hold in the long run as overall income levels change. Overall, it is not quite clear whether these two estimates can really be used as MEP proxies, so no claim is made here that these estimates represent the 'correct' MEP. But at the very least, such estimates do show that there is nothing special about an MEP figure of 1. The above estimates have at least some evidence base, shaky as it may be, while the figure of 1 is no more than an implicit assumption.

Figure 5.4 shows how the weekly poverty line (for a two-adult household) in the UK would have developed over time using alternative MEPs. The starting point is the poverty line of the year 1961, as 60% of the 1961 median income. From then on, each poverty line is adjusted each year by the growth in median income, multiplied by the respective MEP. The MEPs used are the lower and upper bound from Madden's estimate, and the mid-point between them, which happens to coincide with the Leyden Poverty Line estimate. The MEPs for an absolute and a conventional relative measure, 0 and 1, are also included.

Figure 5.4: The evolution of the weekly UK poverty line for a two-adult household in £, 1961-2010, 2010 prices, under different median elasticities of the poverty line (MEP)



-author's calculation, based on data from IFS (2012)

The choice of the MEP barely makes a difference in the first years, but a lot over time. Table 5.3 uses the poverty lines that have been calculated for the year 2010 under the different uprating regimes, and applies each to the income distribution of 2010, to calculate the alternative poverty rates that would have resulted.

Table 5.3: UK poverty rates in 2010 when updating the poverty line with alternative median elasticities

MEP	Poverty line (in 2010 prices)	Poverty line in % of the 2010 median	Poverty line in % of the 1961 median	Poverty rate
0.5	£177	49%	86%	6%
0.6	£190	45%	93%	8%
0.7	£204	42%	99%	9%
1.0	£251	60%	122%	16%

-author's calculation based on data from IFS (2008) and DWP & ONS (2012)

The figures should not be taken at face value. There is no especial reason why 1961 should be the staring year, the poverty lines are applied to an income range where income figures are no longer reliable (see Chapter 3). But what it does show is that, again, plausible changes within the relative framework can make substantial differences to the results. The

rates shown in Table 5.3 are all relative poverty rates; they are all measured against poverty lines that have followed the median over time.

A relative poverty line uprated with an MEP of less than 1 would reflect an implicit assumption that in a growing economy, the cost of social participation rises over time as median incomes rise, but not to such an extent that this 'eats up' all the gains experienced by low-earners. Social participation would then slowly become relatively 'cheaper' as a society grows more prosperous. Within limits, growth could reduce poverty even if it is achieved at the expense of greater inequality. But unlike with an absolute poverty line, this measure would not automatically count every improvement in low-earners' income as a fall in poverty. It would still demand some relationship between growth of low-earners' income and growth of the median.

Once again, plausible changes within the framework of relative poverty have led to fundamentally different results.

5.7 Do relative poverty indicators measure relative living standards?

Critics of relative poverty indicators have argued that these indicators measure nothing but inequality, a criticism which adherents reject on the grounds that these measures are intended to do precisely that. Both sides agree, however, that relative poverty indicators measure inequality in living standards in the bottom half of the distribution. That is, both sides assume that income inequality is the same thing as inequality in living standards. The analysis in Chapter 3, however, has shown that the relationship between 'income' and 'living standards' is a much more complicated one, and by extension, the same must apply to inequality.

Chapter 3 has shown how low-earners' living standards have evolved over the past decades, mostly in absolute terms, but also in comparison to overall living standards at different points in time. It has shown that 'living standards' are a multifaceted phenomenon, which do not simply 'rise' or 'fall'. Rather, they can show improvements in some aspects combined with stagnation or deterioration in other aspects. Measures like real income or real expenditure, indispensable though they are as summary measures, can hide substantial variation across these different dimensions.

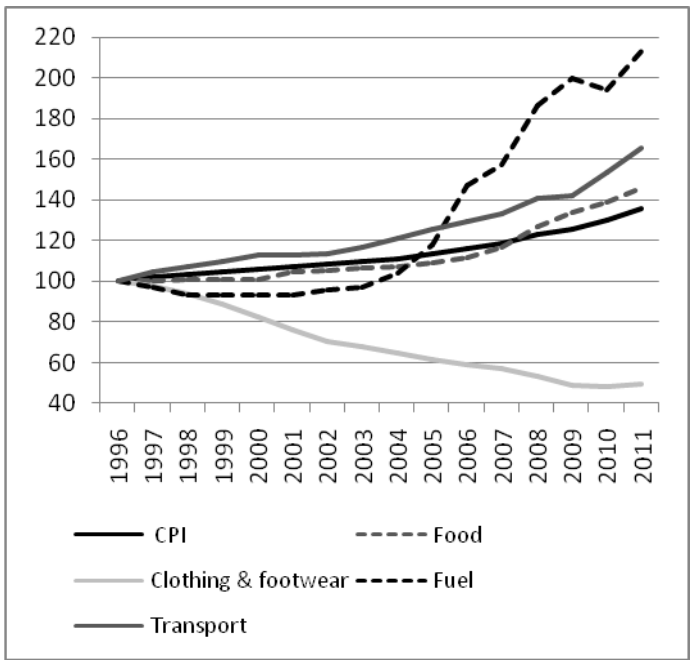
One of the main results was that there have been many changes in low-earners living standards which cannot be seen in income or expenditure figures, and by extension, by poverty figures which are based on them. Living standards can change substantially while income/expenditure and poverty figures remain unchanged.

The structure of relative prices

One of the more obvious reasons for this phenomenon is changes in the structure of relative prices. In effect, households at different parts of the income distribution experience different inflation rates, because of differences in the composition of their typical consumption baskets (see subchapter 3.3). A typical consumption basket for a low-income family is not simply a miniature version of a typical consumption basket for a middle-income family (i.e., the CPI basket). It is a basket in which basic essentials like food and housing occupy a much larger share, which is why price changes in these product categories have a larger impact on low-earners than on average earners. Changes in the structure of relative prices therefore entail changes in relative living standards, even if the distribution of nominal income/expenditure remains constant. Income-based or expenditure-based poverty figures, be they relative or absolute, cannot detect such effects on their own.

Figure 5.5 shows a disaggregation of the CPI, highlighting the evolution of prices for some of the product categories which occupy a disproportionately large share in low-earners' household budgets. Unsurprisingly, there is huge variation across the different components; the CPI itself is not a good predictor for any of its individual components. But these variations are not neutral in their impact on different parts of the income distribution. Between 1996 and the early 2000s, the evolution of the relative price structure has been mildly biased in favour of low-earners. With the exception of transport, the sub-price levels of components which have an especially large impact on this group rose slower than the overall price level. If there had been a specific 'low-earners' inflation rate', it would have been below the official inflation rate in these years. But in the mid-2000s, this pattern began to reverse. For the period as a whole, the change in the structure of relative prices has been biased against people on low incomes. Between 1996 and 2011, the overall price level increased by just over one third, but the price level of food, transport and fuel rose by much more than that. The one component which showed the opposite trend was clothing and footwear.

Figure 5.5: Change in relative prices in the UK, CPI vs. selected CPI-components, 1996-2011, 100= 1996-level



-based on data from ONS (2012)

By the end of the last decade, the Institute for Fiscal Studies (IFS, 2009 and 2008a) published estimates of subgroup-specific inflation rates, differentiated by demographics but also by income. One result was that as a consequence of these changes in relative prices, those on low incomes had experienced inflation rates well above the rate of CPI inflation. Counterexamples like the clothing category helped, but did not have enough weight to offset the other changes. Figure 5.5 shows that the same trends have accelerated since these studies were published, so their results must hold *a fortiori* now. Yet even though this development must have had a negative impact on the living standards of low earners, both in absolute terms and relative to average earners, neither the income statistics nor the poverty statistics could show it. The relative poverty line was uprated by the rate of change in the median income, which contains no information on factors like food prices or fuel prices. The absolute poverty line could not show these developments either. It was uprated by the rate of change in the CPI, but the CPI basket models the purchasing patterns of average households. It cannot capture differential impacts on low-earners. It is therefore not an appropriate tool to uprate a poverty line, even though there is no obvious alternative. Insightful as the IFS studies are, it is not practically feasible to use a different inflation rate for every point in the income distribution. Moreover, while the product categories used in the IFS studies and in Figure 5.5 represent a disaggregation of

the CPI, they are still large aggregates themselves. In short, this means that conventional poverty measures are blind to an important determinant of low-earners – relative and absolute – living standards, and there is no obvious way how this shortcoming could be corrected within these approaches.

The product market structure

Relative prices are only the tip of the iceberg. Several authors have criticised consumer price indices for not taking account of important developments in product market structures, and consumers' responses to them. Meyer and Sullivan (2006, p. 5), for example, show that CPIs are affected by the so-called 'outlet bias', which arises when consumer purchases shift towards low-cost discounters without price level measures taking account of it.

These considerations can be taken further, and applied to poverty research. The emergence of low-cost discounters and 'no-frills' market segments is also a development which has the potential of making the consumption patterns of low-income earners more similar to those of middle income earners within a given income distribution. It is another determinant of absolute and relative living standards which is not captured by either income statistics or poverty statistics.

This idea can be illustrated by considering two highly stylised, hypothetical societies with three income groups, each representing one third of the respective population, and three types of consumer goods. Within each income bracket, all individuals are assumed to have identical incomes and preferences, and there is neither saving nor borrowing. The three income brackets are the 'poor', the 'middle-class' and the 'rich'. Median incomes are identical in both societies, but, as Table 5.4 shows, the income distributions differ.

Table 5.4: The income distribution (in gold coins) in two hypothetical societies

	Society 1	Society 2
Poor	600	500
Middle-class	1100	1100
Rich	1600	1700

Society 2 is clearly the more unequal one in terms of the income distribution. But to know whether this translates directly into more unequal living standards, information about other characteristics of these societies is needed, foremost, about the structure of their

product markets. The products available in both societies, and their respective prices in gold coins, are given in Table 5.5. The three consumer goods are a basic (B), a convenience (C) and a luxury (L) good, and the exact same good carries the same price across both societies.

Table 5.5: Product markets in two hypothetical societies; prices in gold coins

	Society 1	Society 2		
Product category → _____ Product ↓	Standard	No-Frills	Standard	Gold-Plated
Basic (B)	10	5	10	15
Convenience (C)	100	30	100	170
Luxury (L)	500	300	500	700

Product markets differ between both societies. Society 2 has diversified product markets, where each good comes in three versions: A basic 'no-frills' version (N), a standard version (S), and a 'gold-plated' version (G) with extra features (airline travel or household electronics would be realistic examples.) There is no product market diversification in Society 1, where only the standard version of each product is available. Table 5.6 shows how this results in different consumption patterns. For the sake of simplicity, it will be assumed that the poor only buy no-frills products, the middle class only buys standard products, and the rich only buy gold-plated ones.

Table 5.6: Consumption patterns in two hypothetical societies; quantities purchased

	Society 1			Society 2		
	Basic	Convenience	Luxury	Basic	Convenience	Luxury
Poor	10 (S)	5 (S)	0	10 (N)	5 (N)	1 (N)
Middle-class	10 (S)	5 (S)	1 (S)	10 (S)	5 (S)	1 (S)
Rich	10 (S)	5 (S)	2 (S)	10 (G)	5 (G)	1 (G)

In Society 1, more money buys more goods and services; in Society 2, more money buys extra product features and enhancements. It is now no longer obvious which society is the more unequal one. In Society 1, an outside observer could immediately tell who is rich and who is poor by simply observing consumer behaviour. In Society 2, to an outside observer who is not familiar with the characteristics of the products, consumption behaviour in Society 2 would appear fairly similar across all income brackets. Due to differences in the

nature of the product markets, consumption decisions in Society 1 are more often 'binary decisions'; where people can or cannot afford a good. In Society 2, this ability becomes a continuum. It is no longer about *whether* they can afford a product, but to what standard. This makes Society 2, in one sense, the more inclusive one. In this society, nobody is shut out from a consumption habit altogether. There are differences in the standards that people in different income brackets can attain, but not in their ability to participate at all.

Relative poverty measures cannot capture this dimension of relativity, but again, absolute measures are not an alternative. They are just as inept at detecting these changes as relative measures, because they are updated by the changes in the CPI, which provides no information on changes in product markets which are specifically relevant for the poor.

Nor could the CPI be easily reworked to make it more relevant. Differentiation by quality standard is not part of CPI measurement. It is not impossible to construct quality-adjusted price indices, and there are examples of such adjustments for selected product categories (e.g. Schreyer, 1996; Lucarelli & Nicholson, 2009). But this is mostly limited to markets where quality changes occur at an especially rapid pace, and/or are of such a magnitude that the upgraded version could as well be considered a new product (e.g. information technology and innovative medicines). Yet such estimates are not provided on a regular basis, or for the CPI as a whole.

Why does it matter?

These are not just theoretical considerations. Market outcomes are, to a large extent, policy-shaped. Policymakers do not set prices or determine industry structures, but such variables are often responses to the regulatory policy environment that economic agents find themselves in. This environment, in turn, is created by economic policy choices.

A real-world example which comes close to the hypothetical product markets in Table 5.5 is the European aviation industry. Up until the early 1990s, the market for air travel in Europe was a lot like the product market of Society 1 in Table 5.5. From then on, the market has diversified hugely, making it a lot more like the product market of Society 2 in the same table (see also subchapter 3.7). This was not a product of chance. It followed a deliberate and concerted EU policy of removing regulatory barriers that had thus far hindered the

diversification of business models. The no-frills sector developed, because policymakers allowed it to develop.

Policymakers choose what kind of business environment they want to create. These choices affect the (relative and absolute) living standards of low-earners just as much as changes in the (shape or level of the) income distribution. And yet, poverty research virtually ignores the product market side, and limits itself to the study of the income distribution.

The implications will be explored later on. For now, suffice it to say that poverty research ought to be as much about product market developments as it is about the income distribution. Poverty research ought to be able to identify the poverty-reducing effects of competition and productivity growth in markets which are of especial relevance to low-earners, as well as of diversification and the emergence of low-cost segments. Such developments affect low-earners' living standards in both a relative and an absolute sense, and yet neither relative nor absolute poverty measures are able to see these effects. This area is a blind spot in the current arsenal of poverty measures, and a blind spot of poverty research.

5.8 The role of income in kind

The measurement of living standards poses a few general problems which affect poverty measurement in general, regardless of whether a relative or an absolute measure is used. Poverty measures are limited to one aspect of living standards, the aspect which is defined by market transactions or near-market substitutes. Income-based measures are limited to reported cash income; expenditure-based measures are limited to reported cash purchases. Yet living standards are also defined by the consumption of publicly provided services that are offered for free at the point of use, or below cost. Two broad categories can be distinguished here:

- Universally provided public services, such as healthcare and education in the UK. Since they are open to all income groups, they need not be relevant for relative poverty figures, but if they are used more intensively by low-income groups, they have a distributional impact as well.

- Benefits in kind, such as social housing or free medical prescriptions in the UK. These are targeted towards low-income groups via a means-test, but not counted as part of income (or expenditure), which means that they affect the distribution of living standards, but not the distribution of income (or expenditure).

One result of this is that poverty figures are sensitive to the structure of welfare provision. Cash transfers are registered, implicit subsidies in the form of below-cost public provision is not. The implications are shown in Table 5.7, which contrasts the living standards of welfare recipients in two hypothetical welfare regimes, one based on cash transfers and one based on public provision. In the former, recipients receive a total cash transfer of 320 gold coins, to cover general living expenses, housing costs, health insurance costs and transport costs. In the second system, recipients only receive a cash transfer of 100 gold coins for general living expenses, but are entitled to the use of equivalent services provided publicly without user payments. Put differently, the first system is based on subject subsides and the second on object subsidies. Provided the quality and accessibility of the services is the same in both societies, this means that welfare recipients in both societies attain the same living standards, but the second society would record vastly higher poverty rates.

Table 5.7: Cash-based vs. in-kind based welfare state

Welfare system based on cash payments		Welfare system based on In-kind provision	
Instrument	Cost	Instrument	Cost
Income support	100	Income support	100
Housing benefit	150	Cost of public/social housing provision used	150
Payment for health insurance contribution	50	Cost of publicly provided healthcare services used	50
Payment for transport costs	20	Cost of public transport services used	20
Total cash income	**320**	**Total cash income**	**100**

There is no obvious way to make poverty figures neutral with regard to the composition of welfare provision. The cost of service provision cannot simply be added to household income. In the above example, the three spending categories – housing, healthcare and transport – have been treated as monolithic blocks. The possibility that within each category, what the state assigns to recipients is not necessarily what they would have chosen to buy if they had been paid out the monetary equivalent has been assumed away.

But in a real-world case, if a money equivalent is not fungible, it cannot really be treated as money income. This is why poverty figures cannot easily be corrected for differences in the structure of welfare arrangements. If the relative importance of in-kind and in-cash benefits differs across countries and/or changes over time, cross-country comparisons and/or time-series are biased.

There have been attempts to correct poverty figures for this bias in favour of transfer-based welfare states. Wolff (2009) recalculates US poverty rates treating the cost of Medicaid, Medicare, food stamps and subsidised housing as income. The poverty rate can fall by up to five percentage points, but there is a lot of variation between the estimates, depending on how these services are valuated and apportioned to individuals. Food stamps are the easiest case, as their high degree of fungibility makes them near-money substitutes. They are ring-fenced for one product category, but as every household spends money on food, this is a non-binding constraint. The treatment of public health insurance programmes and public housing is more complex and has its limitations, but it is still feasible. Similar services are also bought and sold on markets.

No similar evidence is available for the UK. Sefton (2002) provides an estimate which adds the cost of some public services to household incomes, corrected for differences in utilisation rates. On this basis, the income distribution is significantly more even. The lowest income groups contain a disproportionately large share of children and elderly people, leading to greater consumption of health and education services. The figures show a snapshot analysis, but since public spending on these items has increased over time, it follows that this approach would also produce time series figures different from the figures for cash income.

The OECD (2008, pp. 224-245) provides a similar estimate for its member countries, adding the cost of publicly provided services to household incomes, with some adjustment for differences in service utilisation rates. This produces a more equal income distribution in all OECD countries, but it does not greatly affect the ranking of countries by measures of inequality. So the bias produced by the omission of income in kind does not seem to be a systematic one for cross-country comparisons.

Time-series comparisons may be more affected, as Browning (1989) shows for US data. When the US poverty measure was devised in the 1960s, benefits in kind were not widespread yet, as Medicaid and Medicare were just about to be created. By the mid-

1980s, benefits in kind had come to represent 70% of US welfare spending (ibid). Browning points out that increasing the provision of free services can actually *raise* the poverty rate, by crowding out some of the corresponding cash income.

The estimates by Sefton, the OECD and Browning provide an impression of differences in service consumption between income groups, and of the cost of service provision. But they remain problematic for the reason described above: they take 'cost' as a proxy for 'value'. Sefton (2009, p. 40) simply asserts that *"the amount of expenditure is a reasonable measure of its worth to recipients"*, without substantiating this claim.

The incorporation of in-kind provision can be considered one of the unresolved issues in poverty research. Many of the specific problems of income data could be overcome by replacing them with expenditure data, but this would still leave the valuation of in-kind provision unresolved. It is common to income and expenditure data, just as it is common to relative and absolute measures. It is, again, important to point out that unlike e.g. the definition of the reference territory, the problems described in this subchapter are not specific to relative measures. They have been included here for the sake of completeness, but when assessing relative measures in a comparative perspective, the problems described here cannot be held against relative measures specifically.

5.9 Conclusion

A standard approach in the poverty literature is to explain the case for defining poverty within a social context rather than in an empty space, and then jump from this directly to a relative measurement. The synonymity of 'context-specific' and 'relative' is too quickly taken for granted. But a closer look at the history of poverty measurement shows that the theory and the measurement have not evolved jointly. The synonymity of the two is a post-hoc construction. The idea that poverty has to be defined with due regard to social norms and customary consumption habits has been around well before poverty lines were pegged to national mean or median incomes. It is possible to separate the theory from the measurement, and it is possible to critique the latter without rejecting the former.

Conventional critiques of relative measures have generally failed to draw this distinction. They have criticised relative measures for some of their statistical properties, without

engaging with the theory that these measures ought to embody. In particular, they have criticised relative measures for being measures of inequality, despite the fact that this is exactly their purpose. Supporters of relative measures do not 'confuse' poverty with inequality, rather, they subscribe to a set of very specific assumptions under which poverty *is* inequality. The failure of critics to engage with the theory behind relative measures may be a result of the fact that in the public policy debate, relative measures are rarely used in the sense in which they were originally intended. The frequent misunderstanding is that relative measures are used as if they were measures of physical deprivation, with the attribute 'relative' misinterpreted to mean 'less severe'. Still, it is not enough to criticise the misunderstanding. In academic poverty research, as discussed in Chapter 4, relative poverty rates are still used very much in line with their original intention. This chapter has ignored the misunderstanding, and evaluated relative measures on their own terms. It has evaluated whether 'relative' is really an accurate and robust approximation of 'context-specific'.

The result is that they are not robust. Plausible changes within the framework of relative poverty measurement can lead to completely different results. Relative poverty rates depend crucially on the specification of the reference territory, the reference group and the reference timeframe. Yet the current specifications are not grounded in either the theory of relative poverty, or in any empirical evidence. They mostly reflect administrative arrangements: For example, income statistics are gathered at the national level, and by implication, so are relative poverty figures. Yet there is nothing in the theory of relative poverty which implies that the boundaries of the reference territory have to coincide with national boundaries. Nor is there any empirical evidence suggesting that the national level is more relevant for the formation of social norms than alternative boundaries. A similar logic applies to other dimensions of relativity. There are neither theoretical reasons nor empirical evidence that the cost of social participation should rise linearly, and instantaneously, with median incomes.

Relative poverty measures are not just non-robust, they also fail on their own terms because they miss key determinants of relative living standards. What they measure is income inequality, not inequality in living standards. Inequality in living standards is also determined by the structure of relative prices and the degree of diversification in product markets. Yet relative poverty measures do not contain any information on prices or product

markets. They are blind to many of the developments which affect low-earners relative living standards.

The aim of this chapter is not to judge relative measures by impossibly high standards. 'Social participation' is necessarily an abstract concept, and any attempt to compress it into a statistical measure will be open to challenge. But the conclusions drawn from studies based on relative measures depend critically on the assumptions. If, for example, income benchmarking occurred mostly within relatively homogenous reference groups rather than vis-à-vis a country's population as a whole, the case for narrowing the national income distribution weakens. The same would be true if norms of consumption crossed national borders, rather than being strictly confined to the domestic level: This, too, would mean that relative measures exaggerate the importance of the domestic income distribution in the formation of social norms.

None of these objections would matter greatly if the policies required to address relative poverty came at no economic cost. But Chapter 4 has shown this not to be the case. Other things equal, high levels of redistribution through the tax and benefit system hamper economic progress, even if most studies on relative poverty prefer not to acknowledge it. If there were no trade-offs in poverty alleviation, no particularly strong evidence base on what exactly constitutes poverty would be required. The notion that poverty really is defined by the distance to the contemporary national median, not command over goods and services, would then not have to be especially scrutinised. It is the existence of trade-offs which makes a higher level of scrutiny necessary, and this chapter has sought to provide that scrutiny. It has shown relative measures to be non-robust, which means that the policies of relative poverty alleviation come at a very real economic cost, but offer only highly speculative gains in return.

Apart from the economic cost, there is also a more subtle opportunity cost to consider. The above-described focus on enabling competitive product markets and market diversification may not conflict with policies of income redistribution, as the former do not entail any fiscal costs. These two approaches do not compete for resources – but they may still compete for attention. At least in poverty research, it is fair to say the focus on the income distribution has crowded out other concerns. None of the studies reviewed in Chapter 4 addresses the

issues of market prices or product market structure, neither the studies on relative nor those on absolute poverty.

This chapter has criticised existing measures, especially relative measures, and to a lesser extent absolute ones. But it has not formulated any suggestions for improvement. It has identified a number of flaws of existing measures, but it has not brought forward any counterproposals. Can a different kind of measure avoid these flaws, or are they just inevitable?

The next chapter will address this question, by turning the critique developed here into a positive agenda for developing an alternative.

6. Deriving a new measure of poverty

Relative poverty measures have gained a degree of influence which is not commensurate with the measure's strengths. Chapter 2 has shown how the measure has come to dominate poverty research, social policy, and public perceptions of poverty. As far as the latter is concerned, the measure has given rise to a specific 'poverty narrative' which could not otherwise have emerged, and which, as Chapter 3 has shown, is very far removed from the evolution of the underlying living standards. The use of relative measures has become commonplace because these measures were widely seen to embody the insight that poverty measures have to be defined within a social context rather than in a vacuum. As Townsend (1980) put it, *"a relative measure's greatest theoretical virtue is that it is entirely grounded in national and historical context"*. Since the 'rediscovery of poverty', poverty has been understood as the inability to comply with consumption-related social norms, and relative poverty measures have been seen as the translation of this abstract idea into a tangible indicator. The poverty line has been treated as a proxy measure of the cost of participating in a specific society in a specific time period.

But Chapter 5 has challenged the notion that 'context-specific' is the same as 'relative'. Relative measures do not contain information about time-specific and place-specific social norms; they simply tie the poverty line to a statistical average which may or may not have much social relevance. These measures do not assess the cost of complying with social norms; they merely treat increases in median incomes mechanistically as a burden on the poor. Studies on relative poverty state the broad, abstract idea of context-specific poverty, and then jump directly from this description to a relative measure, as if the latter automatically followed from the former. It does not, and a closer look at the history of poverty measurement in the previous chapter has also shown that the general idea was already fully worked out well before the statistical measure emerged.

At the same time, relative measures fail to register developments which do affect the least well-off in very tangible ways. The emergence of relative measures began with an apt critique of the Budget Standard Approach which had dominated poverty research until then. This approach was criticised because the hypothetical baskets it used bore little resemblance to poor people's actual purchasing behaviour. These baskets were therefore, justifiably, dismissed as socially irrelevant. But ironically, Rowntree-style poverty baskets

had at least some overlap with poor people's actual consumption habits, while the relative standards which replaced them are completely detached from them. Relative standards contain no information about what it is that poor people can or cannot afford. Based exclusively on the distribution of nominal incomes, they are blind to any developments in product markets which affect the living standards of the least well-off.

In the course of the rediscovery of poverty, critics of the old BSA method have significantly advanced poverty research. The critique of relative measures developed here is not intended to subtract, in any way, from these achievements. On the contrary: As Chapter 5 has shown, it is entirely possible to separate the theory from the measurement, and accept much of the former while rejecting the latter. The insights that needs are to some extent socially determined; that there is nothing intrinsic in goods which makes some 'necessities' or others 'luxuries'; that social needs are just as real as physical ones – these are the insights which poverty research owes to the critics of the BSA method.

Nevertheless, this thesis rejects relative measures. These measures do not provide any additional insights beyond what is already contained in a standard measure of inequality of the bottom half of the distribution, e.g. the P50/P10 ratio. Statistically, the P50/P10 is a nearly perfect substitute for relative poverty measures (see subchapter 5.1). The difference is that the P50/P10 ratio commands no comparable influence on research, public opinion and public policy. It does not produce any broad-brush narratives, and there are no 'P50/P10 targets' enshrined in law. Researchers do not read properties into it which it does not possess: The P50/P10 is never taken to be a measure of social inclusion or exclusion. It is interpreted as no more than what it is: a measure of income inequality in the bottom half of the distribution. There is no reason why relative poverty figures should carry greater weight than P50/P10 figures.

6.1 What a poverty indicator should achieve

The last chapter has been a critique of relative measures 'from within', it has evaluated relative measures by their own standards rather than, as many previous critiques have done, by the standards of a different poverty measure. It has been found wanting, on this basis, but this does mean that the conventional alternatives are any better. Chapter 5 has merely singled out relative measures because this is the 'headline measure' which draws

most of the research attention – *not* because the critique developed is unique to this class of indicators. This chapter will begin by showing that much of the critique applies to other measures as well. There is currently no fully convincing alternative.

Yet the main purpose of this chapter is not to criticise, but to develop an alternative. By implication, the same criteria which have been developed in the previous chapter to critique relative measures can also be used as a blueprint for developing an alternative:

- Relative measures have been critiqued for their high degree of sensitivity to the choice of the reference point. Small and plausible changes to the territory, the social group or the time horizon can completely overturn the results. By implication, this means that the challenge consists of finding a measure which is more or less immune to changes in such variables.
- Relative poverty lines have been critiqued for lacking a clear interpretability. For all the faults that the Rowntree-style BSA poverty line had, it was at least clear what it stood for: It corresponded to a well-defined quantity of goods and services. A construct like '60% of the equivalised median' has no such interpretability. This may well be the reason why it is prone to such widespread misunderstandings, for example the mistaking of relative poverty for material deprivation, and/or the misinterpretation of 'relative' to mean 'less severe'. By implication, this means that the challenge consists of finding a measure which has as clear an interpretability as the BSA.
- The poverty line should not just be understandable. There should also be a theoretical justification why a living standard below this line should be classified as 'poverty', and a living standard above it should not. More precisely, the poverty line should be related to some estimate of the cost of social participation. This is what relative measures attempt to do, but, it has been argued here, fail to do.
- Relative measures have been critiqued for their inability to detect changes in product markets which affect low-earners disproportionately. By implication, this means that the challenge consists of finding a measure which absorbs relevant information about market prices.
- Relative measures, and income-based measures more generally, have been critiqued for their sensitivity to the structure of welfare provision. Cash transfers are counted as part of income, equivalent implicit subsidies are not. By implication, this means that the challenge consists of finding a measure that shows which goods

and services people can afford, regardless of how exactly they are being provided. Due to issues of valuation, this problem may not be fully solvable, but there must be a better alternative than not addressing it at all.

The previous chapter has not simply dismissed relative poverty. It has fully acknowledged the merits of some of the key ideas embodied in this measure. The thrust of the critique has been that relative indicators do not measure what they are supposed to measure, a line of critique which already contains an acknowledgement that some of the main ideas are worth preserving, even if they ought to be expressed in a different way. In particular:

- A sensible poverty measure must be context-specific rather than universal. Poverty measures must therefore differentiate between social contexts, and reflect differences in perceptions of what constitutes a necessity and what does not. This involves a recognition that poverty in developed countries, or nowadays, even middle-income countries, can no longer be limited to physical deprivation. It must recognise the social nature of needs, and the importance of social participation as a necessity in its own right.
- A poverty measure must reflect the fact that needs are dynamic and evolving, rather than static. It is not sufficient for a poverty measure to be socially relevant at a single point in time. It must also find a way to remain relevant as new consumption habits become the norm over time.
- A poverty measure must not assume implausibly high levels of spending efficiency. It must not be built on an idealised pattern of economical consumption that is too far removed from people's actual consumption patterns.
- A poverty measure must recognise that there are no 'objective' needs which can be ascertained by researchers alone. If a good or service is near-universally perceived to be a necessity, then it *is* a necessity, at least in that particular society at that particular time.

These are the some of the key criteria by which poverty measures ought to be judged. The BSA measure was abandoned because it failed on (at least) the last four accounts. Relative measures fail on (at least) the first five accounts.

6.2 Why (quasi-)absolute measures are not an alternative

The insight that poverty is context-specific is no longer controversial, which is why absolute poverty lines in the pure sense of the word have practically disappeared in the developed world. Most figures of absolute poverty in developed countries are not 'absolute' in the sense of 'fixed for all times and places'. They are mostly used for snapshot cross-country comparisons limited to highly developed economies, or for medium-term time series within a country (see Chapter 1). If the latter, they normally take the relative poverty line of a selected year, decouple it from the median, and couple it to the CPI instead. In the UK, the second child poverty target has so far been specified in terms of a measure which uses the relative poverty line of the year 1998, and updated it by the rate of CPI inflation. For the 2020 target, the base year will be changed from 1998 to 2010, which makes the measure a 'step-fixed relative poverty line'. It is absolute in the short run and relative in the long run.

But if the national median is not the relevant benchmark for poverty measurement, then quasi-absolute measures are just as flawed as relative ones, because they are just as firmly pegged to the national median. Whether this is the median of the current year or a fixed year in the recent past is immaterial. If there is no good reason why 60% of the contemporary median income should be a reasonable approximation of the cost of social participation, then neither is there a good reason why 60% of a past year's median income should be.

Hence, a quasi-absolute poverty line has no meaningful interpretation of its own. A poverty line should correspond to a living standard which can, by some theoretical criterion, be interpreted as a decent minimum standard for a particular society at a particular time. An absolute poverty line cannot be interpreted in this way, nor is it necessarily meant to fulfil such a role. In the UK, and sometimes in publications by international organisations (e.g. OECD, 2008, pp. 129-130), absolute poverty is used as an auxiliary measure. Its purpose is to supplement relative rates by giving an impression of how absolute living standards have evolved over the same time. It is a measure which is used because of the trend it produces. The rate of any given year is not meant to have a meaning of its own.

However, if the measure's only purpose is to check the direction of change in low-earners' absolute living standards, one might as well look at a measure of living standards directly,

without benchmarking it against a reference level. The trend in e.g. real expenditure at the 5th and/or the 10th percentile, or the bottom decile, would then be just as informative. If a relative poverty measure provides no additional information beyond what is already contained in a standard measure of inequality in the bottom half, then an absolute poverty measure provides no additional information beyond what is already contained in a standard measure of living standards at the lower end. The former could then just as well be replaced by e.g. the P50/P10 ratio, and the latter could then just as well be replaced by e.g. real expenditure of the bottom decile.

Albeit for a different reason, quasi-absolute poverty standards also share the other major weakness of relative ones: They are blind to product market developments which affect the living standards of the less well-off. Fixed poverty lines are updated by the rate of CPI inflation, which is the wrong tool in the context of poverty measurement. It measures changes in the cost of a basket of goods which resembles the consumption pattern of average households, not of low-income households. This makes those quasi-absolute measures just as unable as relative ones to appreciate the role of product market competition, frugal innovation, market diversification etc. in the alleviation of poverty.

6.3 Why material deprivation measures are at best a partial alternative

Of the poverty measures currently in use, it is the material deprivation measure which best fulfils the criteria outlined above. Based on a tangible list of goods and services, this measure has a clear and meaningful interpretation. Outcomes such as falling poverty rates amidst falling living standards, common when relative measures are used, do not occur with this measure. To some extent, material deprivation standards are even able to capture product market developments and changes in access to benefits in kind. Other things equal, changes in the market prices of the items in the basket will affect people's ability to afford them, and hence the material deprivation score. Also, increases (decreases) in the generosity of benefits in kind will free (bind) resources for the purchase of other things, which will affect the material deprivation score. Misreporting of some income sources, or short-term fluctuations, are not an issue either. What determines the material deprivation score is *whether* a household can afford the items on the list, not *how* they manage to achieve this.

But material deprivation has its shortcomings nonetheless. First of all, the basket of necessities is assembled in an arbitrary way. There is no guarantee that the items in the basket resonate with what a majority of the population, or what most poor people themselves, would consider 'necessities'. The basket need not coincide with common perceptions of what represents a decent minimum standard. Therefore, strictly speaking, material deprivation indicators measure low consumption standards, but they do not actually measure poverty.

Secondly, material deprivation measures have great difficulties in distinguishing between material constraints and preferences. It has been shown that respondents who lack some of the 'necessities' specified on a material deprivation list often possess 'luxuries' (McKay, 2004; Myck, 2005). It has also been shown that high material deprivation scores can still occur even among high-income groups, albeit less frequently than among low-income groups (Brewer et al, 2008). This is why, in practice, material deprivation measures are more often used as part of a blend than in their pure form. In the UK, the material deprivation indicator which forms the basis of the third child poverty target is really an alloy of material deprivation and relative poverty. To be classified as materially deprived, a household does not just have to attain a minimum deprivation score, it also has to record an income below 70% of the contemporary median. This second condition ensures that about a third of those who would otherwise be counted as materially deprived are filtered out, but it is a very crude mechanism. The fact that many households on very low incomes avoid material deprivation is not remarkable: Chapter 3 has shown that income fails to predict living standards at the tails of the distribution. But what is remarkable is the fact that about a third of the materially deprived have incomes above 70% of the median. As Chapter 3 has also shown, in the middle deciles of the distribution, income remains an adequate predictor of living standards. Hence, if a high proportion of the materially deprived have incomes in this region, it is a manifestation of the difficulties that this mechanism has in identifying those with low living standards. Excluding this group from the statistics does not really solve the problem, it merely removes the most obvious symptom.

Most material deprivation surveys attempt to control for the conflation of preferences and constraints directly: When survey participants lack an item, they are asked whether this was because they cannot afford it, or because they do not want it. But this is only a very small step towards solving the problem. The control question merely filters out those who do not value the respective item at all, i.e. those who would not want it even if it was

available for free. It does not filter out those who do value the respective item, but who value other items more, with the latter not included in the list. It treats 'wanting' and 'not wanting' an item as a binary variable, when it really is a matter of a ranking of priorities. As a result, material deprivation levels will be systematically inflated. Their main problem is their inflexibility. As soon as a household substitutes a few items which are not on the list for items which are on the list, they are counted as materially deprived. Material deprivation measures do not allow substitution, which makes them sensitive to minor variations in people's priorities.

This downside cannot be corrected further. Material deprivation is an outcome-based measure of living standards, unrelated to inputs like income or expenditure. It measures whether people attain a particular outcome, not how they do it. This can be a strength. It enables the measure to capture unobserved inputs that also affect living standards. But it is also a weakness, because this is what makes the measure is so inflexible. In order to count as non-deprived, people have to attain the outcome specified in the list. Not a similar outcome, not an equivalent outcome, but the exact same outcome.

In theory, this shortcoming could be avoided by specifying the items on the list in a more general way, to allow some substitution. But insofar as this is already being done, it seems to exacerbate the problem rather than solving it. There is already a lot of variation in the level of generality in material deprivation lists, from concrete goods ('a car') to general purposes ('keep the home in a decent state of decoration'). The broad pattern that is recognisable is that the higher the level of generality, the greater the proportion of people who claim to be unable to afford the item. This proportion is always lowest for the items that are specified in the most straightforward manner. The more room for interpretation a question leaves, the higher the share of respondents who declare to be unable to access the item. Apparently, when the level of generality is high, the items on a material deprivation list mean different things to different people, which will invariably affect their answers.

This pattern can also be observed when comparing material deprivation studies that differ in the level of generality. The EU's material deprivation measure asks whether respondents are able to eat meals with meat, poultry or fish at least every second day. The result is that in Western Europe, virtually every household can afford this (Eurostat, 2005a). The OECD's material deprivation measure contains a similar entry, but phrased in a more general way,

asking participants whether they could 'buy the food the family needed' (Boarini & d'Ercole, 2006). The share of respondents who answer in the negative is now vastly greater, and there is now a lot of variation between countries that score similarly on the equivalent question in the EU's indicator. More generally, for those questions that leave more room for interpretation, material deprivation measures often show wide variation between countries which appear very similar in terms of low-earners' living standards according to more objective data.

Within countries, the variation across items is often simply implausible; bearing no relation at all to the item's cost. Table 6.1 shows a selection of items, alongside with the percentage of households who report to be unable to afford them. According to these figures, almost half of the population cannot afford small savings, or to let their children go swimming once a month. A third of all parents cannot afford allowing their children to invite their friends for tea or a snack once a fortnight, an activity which costs virtually nothing. But for items which can be genuinely costly, such as those related to family holidays, housing space and heating, similar or even lower rates are recorded.

Table 6.1: Material deprivation rates for selected items, UK, 2007

		% of respondents without access to item
Low-cost items	Regular savings of £10 a month or more for rainy days or retirement	44.5%
	Child(ren) can go swimming at least once a month	43.0%
	Have friends or family around for a drink or meal at least once a month	40.2%
	Child(ren)'s friends around for tea or a snack once a fortnight	31.8%
Costlier items	A family holiday away from home for at least one week a year	35.5%
	Enough bedrooms for every child of 10 or over to share their bedroom only with siblings of the same sex	24.9%
	In winter, able to keep accommodation warm enough	7.5%

-based on data from Brewer et al, 2008, p. 62

The problem with these figures is not just their implausibility, but also the fact that they are unrelated to relevant objective data. Chapter 3 and Subchapter 5.7 have shown that the affordability of housing space and fuel has become a more pressing issue over time. Prices of these product categories have risen at rates well above inflation, and spending on them has increased as a proportion of low-earners budgets. Yet the material deprivation figures do not record these developments.

In short, material deprivation is a back-of-the-envelope indicator of a low consumption standard. It is not an accurate indicator of poverty.

6.4 Why 'all of the above' is not an alternative

Poverty researchers often respond to critiques of relative or other indicators by pointing out that no single indicator can capture all dimensions of poverty. According to this argument, each poverty indicator may be flawed on its own, but a package of indicators provides an adequate account. This tendency may well explain why the number of child poverty targets in the UK has increased from initially just one – relative poverty –to three, and then later to four.

It is certainly true that poverty is a multi-faceted phenomenon, even when limiting it to its material aspects. Chapter 3 has documented some of the difficulties in measuring living standards at the lower end, and concluded that no single indicator captures all its dimensions on its own. If this is true for living standards, it must be *a fortiori* true for the much more abstract concept of poverty.

However, in order to deflect critique of an indicator, it is not sufficient to point to its role as part of a package. Proponents of this position would have to show that different measures complement each other sensibly, and neutralise each other's flaws. There is no *a priori* reason why indicators which are flawed on their own become accurate as soon as they are bundled together.

Bundling is sensible when measures can be shown to complement each other. This is clearly the case for the relationship between e.g. a poverty headcount rate and a poverty gap measure: The former shows what proportion of a population falls below a poverty line, the latter shows how far below it they fall. Movements into opposite directions have a clear

and meaningful interpretation. If, for example, the poverty rate falls while the poverty gap increases, this is most likely to indicate movements from just below to above the poverty line. It could reveal an anti-poverty strategy which succeeds by picking 'low-hanging fruits', and which is thus less successful than headline figures suggest. However, no such relationship exists between e.g. absolute poverty and material deprivation, or between either of the two and persistent relative poverty. There is no obvious interpretation for a situation in which, for example, absolute poverty falls while material deprivation rises. The situation may be reasonably explicable with recourse to more background data, but the two poverty indicators are certainly not natural complements.

On a more practical level, while the use of a whole package of measures may be appropriate for poverty research, Chapter 2 has shown that the public policy debate does not take place in this way. Rather, one measure tends to become the headline measure, and the figures it produces tend to be reported as 'the number of households below the poverty line', or 'the number of households in poverty'. This is not an argument against the use of a package of measures, but it is an argument for at least establishing a clear hierarchy within the package. There should be one single indicator which captures the most important dimensions of poverty on its own. Other measures can then fill in the inevitable gaps, provide supplementary information, and add nuance. But there should be one indicator which, by itself, enables a rough assessment of the extent of poverty, its time trend, some of its causes, its geographical concentration, its risk groups and risk factors. This key indicator should be able to perform this task single-handedly – *not* in conjunction with two or three other indicators. If it misses important information, the adequate response should be to restructure it in such a way that it takes this information on board, not to add yet another indicator to the package. This measure would then enable an informed poverty debate even if it was used out of context. It would miss many subtleties if so used, but it would not suffer from systematic biases. None of the measures so far discussed can perform this task. The claim that they can do so as a package is itself questionable, and not especially relevant, since the public policy debate on poverty does not use packages.

It is not even clear whether it would improve the quality of the poverty debate at all if it could be broadened to use the full package rather than just the headline measure. Unless there is a clear priority ranking among the indicators, the use of a bundle entails the danger of a 'pick-and-choose' approach among policymakers, with each side selectively using the

indicators that suit their argument. There are advantages to having a single measure of poverty which is not negotiable, at least in the short term. When, for example, GDP falls or the unemployment rate rises, no government could credibly argue that according to some alternative measure, the economy had actually grown, or unemployment had actually fallen. A robust poverty indicator should impose the same rigour.

6.5 Promising developments in poverty research, Part 1: Consensual material deprivation

In the 1980s, Mack and Lansley (1985) pioneered a new approach to poverty measurement within the overall framework of material deprivation. It is based on large-scale surveys which attempt to establish a consensus on which goods and services constitute necessities in the context of contemporary Britain. This 'consensual material deprivation' (CMD) approach has been developed into the Breadline Britain Survey, and later into the Poverty and Social Exclusion Survey (PSE) (see Gordon et al, 2000; Pantazis et al, 2006; PSE, n.d.).

The basic idea is that what qualifies as a necessity should not be determined by researchers, but by the public, through the mentioned large-scale survey (which, technically speaking, is not a survey of its own, but the PSE authors' input into the Omnibus survey). Respondents are presented with a large list of goods and services, and are asked to identify which of them they consider necessities that everybody should have, and which of them they consider desirable but not essential. An item qualifies as a necessity when the majority of respondents consider it so. Once the list is established, the CMD approach continues just like a conventional material deprivation measure. The CMD list, which is available with data from 1983, 1990, and 1999, possesses a number of interesting properties:

- 'Necessities', as understood by the majority of the population, include much more than what is necessary for mere physical survival. Several household electronics, durables and modern conveniences have become necessities, and so have various items related to social participation, comfort, mobility and quality of life. The PSE list is very far away from the poverty baskets of the BSA era. It reaffirms the insight that needs are context-specific and evolving.

- But it is also true that respondents use the term 'necessity' cautiously. They do not apply it indiscriminately; they do not simply label everything a necessity. A number of items which were already widely used during the survey years were rejected with a clear majority. The survey is not treated as a personal wish list.
- There is a surprisingly robust consensus about what constitutes a necessity and what does not. Of course, there are a few borderline cases of items which just over, or just under 50% of the respondents classify as a necessity. But the tails of the distribution outweigh the middle section.
- The authors also perform a subgroup analysis, testing whether there are systematic differences between the responses of different social subgroups. They argue that if this is the case, *"the definition of a necessity would just become the opinion of one group against another"* (Pantazis et al, 2006, p. 114). Hence, respondents are split along different variables, according to region, gender, age, ethnicity, markers of social class etc. It turns out that for those items that enter the CMD list, deviations from the majority view are random ones. With a few exceptions, responses do not differ systematically across social subgroups. This subgroup-neutrality, albeit imperfect, means that CMD stands in stark contrast to relative measures, which have been shown to be extremely sensitive to changes in such variables. Median incomes and hence relative poverty lines differ vastly across regions and social subgroups, but the CMD list does not. England and Scotland, for example, differ in median incomes, so their relative poverty rates would be very different if they were treated as sovereign states. But when asked to assemble a list of necessities, English and Scottish respondents include, by and large, the same items. With a CMD poverty measure, a secession of Scotland from the UK would be relatively unimportant for the English and Scottish poverty rates.
- A comparison of the results from 1983, 1990 and 1999 shows that people's understanding of what constitutes a necessity becomes more encompassing over time. The 1999 basket contains a number of items which the 1983 basket did not yet contain: the telephone entered, as did an outfit for social occasions, inviting friends and children's friends for a meal or a snack at regular intervals, and a few other items. But this happens gradually. There is no evidence that the implicit CMD poverty line tracks median incomes, or any other macro-variable.
- And while this is not discussed by the authors, an interesting pattern becomes recognisable when comparing goods that have crossed the 50% threshold between

1983 and 1999 to those that have not. The relationship between the prevalence rate of a good (see Chapter 3) and the share of respondents who consider it a necessity is a loose one; an item does not become a necessity just because many people have it. In the 1999 PSE list, items like video recorders and foreign holidays were clearly rejected, even though a large majority of the population had access to them. It is not prevalence rates per se that determine necessity status. What seems more important is whether a good or service also changes social interactions and thus raises social participation costs. The telephone has become a necessity because it is the perhaps most conventional textbook example of what economists call a 'network good', a good which becomes more valuable (and eventually indispensable) as more people acquire it. In a society in which few people own a telephone, it is not a prerequisite for social participation. The infrastructure of communication will be based on other means. But as more and more people acquire a telephone, this social infrastructure itself changes. Arguably, the same logic applies to internet access nowadays. If, for example, job adverts are gradually moved from newspapers to online platforms, internet access becomes a different kind of good altogether. As long as these adverts are placed both in newspapers and online, internet access is merely a more convenient way to access the same core product. But as internet access spreads and job adverts are eventually shifted entirely to this medium, it becomes an instrument for social participation. This is a social change which is not related to median incomes in any obvious way. It could occur with stagnant median incomes as well – just as rising median incomes could be channelled into the acquisition of goods and services which do not affect social norms, or only to a minor extent. This is, necessarily, a tentative observation. There is no systematic research on what determines perceptions of necessities. But it is an observation that is consistent with PSE data so far.

Taken together, it turns out that the CMD/PSE approach solves some of the key problems that Rowntree was unable to solve with his overhauls of the BSA method (see Chapter 2). Simultaneously, it avoids most of the problems of relative and quasi-absolute poverty measures that have been identified in Chapter 5. With a CMD measure, the identification of the reference territory is not a problem: The 'correct' territory is the territory in which there is no systematic regional variation in the identification of necessities. As long as this is the case, the territory can be expanded, and when regional variation can be detected, the

territory ought to be split. Within the UK, there is no substantial systematic variation, so one single CMD list can be applied to the country as a whole. But it would also be possible to compile four separate, regional CMD lists – an English, a Scottish, a Welsh and a Northern Irish one – and derive the respective material deprivation rates separately, each one based on the respective regional CMD list. The weighted average of the four regional CMD rates would be very close to the national CMD based on the list for the country as a whole, since the national and the four regional CMD lists are very similar.

There is good reason to assume that the inclusion of some of the neighbour countries would also make little difference. There is no European version of the PSE, but the CMD survey by Guio et al (2009), albeit not nearly as encompassing, has to be the nearest equivalent. It suggests that there are large overlaps in the consensual identification of necessities even across the EU-27. The common denominator is probably not large enough to justify the use of a pan-European poverty measure, but much of the difference is explained by the gap between Eastern and Western Europe, and even this difference is not nearly as large as the difference implied by national relative poverty lines. For North-western Europe alone, it is very likely that the use of one single CMD list would be feasible. But this is no more than an extrapolation. If an equivalent of the PSE survey would cover the whole of North-western Europe, it would still have to pass several tests. It would have to be established that the CMD list compiled by UK respondents does not differ systematically from the CMD list compiled by e.g. German respondents, and this relationship would have to hold across the regions as well. The CMD list compiled it e.g. Scotland would have to be plotted against the CMD list compiled in e.g. Saxony to check whether there is more variation than what can be explained by chance.

But either way, the CMD poverty rate can be computed in every constituent region separately. On this measure, the UK poverty headcount based on a national CMD list would be about equal to the sum of the English, the Welsh, the Scottish and the Northern Irish poverty headcounts based on regional CMD lists. It does not make a large difference whether the CMD is compiled in each region separately and if the results are aggregated into national figures later on, or whether it is compiled at the national level and then broken down into regional figures later on. Regional medians may differ, regional CMDs do not, or much less so.

Neither is the question of timing an important one. Under the CMD approach, an item becomes a necessity as soon as the majority of the respondents consider it so. If perceptions of what constitutes a necessity catch up quickly with increases in overall living standards, the CMD list (and thus the implicit poverty line) expands quickly. If there is a considerable time lag, then the CMD list (and thus the implicit poverty line) expands only slowly. It depends on how the diffusion of new goods and services affects social interactions.

Having said all that – the CMD remains a measure of material deprivation, and as such, it suffers from the same disadvantages that have been described in subchapter 6.3. For all its interesting properties, it is not in itself an alternative.

6.6 Promising developments in poverty research, Part 2: Qualitative Consensual Budget Standards

Rowntree's BSA method fell from grace in the 1950s, but it never completely went away. In developed countries, rates for income replacement benefits or minimum wages can sometimes be traced back to some form of minimum budget standard calculation, albeit often in an arcane way (see Veit-Wilson, 1998). More recently, there have been a number of attempts to revive the methodology by 'democratising' it, i.e. exploring ways to assemble the baskets in a more consensual manner (Collins et al, 2012; Hoff et al, 2010; Bradshaw et al, 2008). This approach is interesting insofar as it attempts to tackle an acknowledged weakness of the BSA method in a targeted manner. The BSA method had originally been abandoned because its detachedness from social conventions had made it socially irrelevant. The attempts to produce a 'Consensual Budget Standard' (CBS) can be seen as attempts to tackle this flaw directly, and thereby, whether this is the researchers' intention or not, rehabilitate the BSA method.

So far, the method which CBS studies have chosen to assemble consensual baskets has been the focus group discussion. Thus, up until here, CBS research has been qualitative research. In the UK, the general idea of gathering a minimum basket in this way has been first formulated by Walker (1987). It has been developed further at the Centre for Research in Social Policy at the University of Loughborough and the Family Budget Unit at the University of York, and finally evolved into the 'Minimum Income Standard' (MIS) published

by the Joseph Rowntree Foundation (Bradshaw et al, 2008; Hirsch et al, 2009). Similar approaches have been tried in the Netherlands (Hoff et al, 2010) and Ireland (Collins et al, 2012). The qualitative CBS method has also been used to derive minimum standards in selected areas of consumption or for selected population subgroups (see PSE, n.d.). Once the basket is assembled, the CBS becomes essentially a BSA: Prices of the items in the basket are gathered, and the total cost of the basket then becomes the poverty line.

But as appealing as the idea of rescuing the strong aspects of the BSA method, while discarding its original flaws, may be, CBS research has thus far not achieved this aim. The previous subchapter has argued that the CMD survey method has shown to have a number of desirable features. However, the CBS' focus group discussions have failed to replicate these features. In the CMD survey, respondents have used the term 'necessity' in a comprehensive, but not in an indiscriminate fashion. For the vast majority of respondents, 'necessities' are much more than what is necessary for physical functioning; it also includes a range of modern conveniences and social participation. But at the same time, respondents have used the term in a balanced and considered way; they have not simply classified everything as a 'necessity'.

The same cannot be said about the baskets which the CBS focus group discussions have produced. In the 2008 pioneer study, the minimum budget for a family of two adults and two children already amounts to 89% of median income even before housing costs are included (author's calculation, based on data from Bradshaw et al, 2008, p. 27 and IFS, 2008). If realistic rent levels were included, the cost of the CBS basket would have to rise above the median, resulting in a poverty rate above 50%. This is, however, avoided through the use of an implausibly low housing cost allowance for the calculation of the final MIS. The housing cost item in the MIS basket is the local authority rent level recorded in the town of Loughborough, where the focus group discussions take place. Including this rent level, the cost of the MIS basket rises to just above 100% of the equivalised median. This relationship is, however, not reported in this format. The cost of the MIS basket is expressed as a proportion of median incomes, but only on a basis which excludes several items (Bradshaw et al, 2008, p. 37). The main issue, however, is that Loughborough is highly unrepresentative of rent levels in the UK, because it is one of the cheapest rental markets in the country (see LHA Direct, 2012). The use of local authority rents is also problematic, as not every low-income household qualifies for council housing. Table 6.2 shows the hypothetical MIS levels that would result if private rental rates for the same dwelling type

in different cities were included. When substituting the Housing Benefit rate for a family of four in Glasgow for the local authority rate in Loughborough, the MIS poverty line would rise to 111% of median incomes. When doing the same with Housing Benefit rates of Brighton, the cost of the MIS basket rises to 127% of the median, more than twice the relative poverty threshold.

Table 6.2: The Minimum Income Standard for a family of four, 2008, per month

	in £, 2008 prices	in % of the 2008 median
Minimum income standard excluding housing costs	£2,414	89%
Minimum income standard including housing costs	£2,715	100%
Hypothetical Minimum Income Standard using Glasgow rents	£3,022	111%
Hypothetical Minimum Income Standard using Brighton rents	£3,443	127%

-authors calculation, based on data from Bradshaw et al (2008), p. 27; IFS (2008) and LHA Direct (2012)

Poverty rates around or in excess of 50% are not problem when an absolute measure is used, and applied to a poor country. But for a context-specific poverty line which attempts to approximate the cost of social inclusion, it becomes self-defeating: The interpretation would have to be that about half of the population is excluded from the consumption norms of society, but at the same time, they themselves *are* about half of that same society.

It is beyond the scope of this chapter to enquire why the focus group methodology produces these results. Whether it is due to the more general limitations of this methodology (e.g. Stycos, 1981), or whether it produces some form of 'outbidding' or 'logrolling' among the participants, or something else entirely, cannot be assessed here. But suffice it to say that the MIS basket deviates vastly from the CMD list identified in the PSE survey.

6.7 A synthesis: A CBS based on the PSE, and aided by the LCFS

The CMD method is strong in identifying a list of necessities, reflecting a robust and subgroup-neutral consensus. But in identifying who can and who cannot afford the items on the list, it suffers from the general problems of material deprivation measures. The focus group-based CBS produces a tangible poverty line based on actual market prices of goods and services. But is has problems in identifying what should and what should not go into that basket. Their strengths and weaknesses are thus complementary. Therefore, this thesis makes the case for combining the best of the two approaches, and to upgrade the blend with additional information from the expenditure surveys.

It could work like this: In a large-scale survey, respondents would select a basket of necessities by majority decision. This survey could either be the PSE itself, or an equivalent which takes account of the changed purpose. As soon as the list of necessities is assembled, it would be converted into a consumption basket containing concrete goods and services, rather than general product categories. Once this transition is finished, the CMD list would have become a CBS basket. However, the gap between the broad item categories identified in the CMD survey and the tangible products that form the CBS baskets is rather large. This is where the Living Cost and Food Survey (LCFS) comes in. The LCFS contains information on revealed preferences, it shows which goods and services are really being bought and sold in the country. This makes it suitable to perform the task of an 'interpreter' between the CMD list and the CBS. By taking account of revealed preferences, the CBS would contain an additional layer of information which no other poverty indicator currently contains. This would anchor the CBS even more firmly in its social context. Potentially, other tools could complement the LCFS.

For example, the PSE survey's entry 'a hobby or leisure activity' could mean a lot of things; it is far too general to be included in the CBS basket, but second-guessing which activities the survey participants might have had in mind would be far too arbitrary and discretionary. Therefore, the LCFS should be used to identify a leisure service which really is frequently bought on the market. This item should then enter the poverty basket, and its market price should become part of the poverty line. In cases where this is not clear, the LCFS can also be a guide to deciding the frequency of a purchase.

The use of the LCSF is not unproblematic. There could be sampling problems which leave the poor underrepresented, and even though the LCFS is much more detailed than the PSE, it is still a list of product *categories* rather than a fully defined consumption basket. This is why the LCFS does not go the whole way. Or to remain within the 'interpreter' analogy: If the translation of the PSE into a fully specified CBS basket is thought of as a translation from English into German, then the LCFS would be like an interpreter who can only translate from English into Dutch: Their translation would be intelligible to German-speakers who listen closely, but it would still leave room for interpretation, so misunderstandings could not be ruled out.

Fortunately, as will become clear in Chapter 7, the recourse to the LCFS does not have to be made often. But the final chapter will still contain a section of how this, and other methodological issues, could be dealt with in future research.

Prices should be collected at the local level, to account for geographical variation. Here, a trade-off between accuracy and simplicity arises: The more the price collection is localised, the greater the number of poverty lines that result. The ability to take account of local variation is one of the key strengths of the BSA, but there is nevertheless a limit to how local the poverty lines can be.

The price of goods which are provided free at the point of use would be set to zero. For goods and services which are highly subsidised and offered outside of a market setting, the price at the point of use would be included. For example, the fact that most healthcare in the UK is provided by the tax-funded NHS means that the British CBS basket would differ from the CBS basket of most other developed countries. The price of goods and services related to healthcare would be set to zero, or limited to payments like prescription charges (which are more like an administrative fee rather than a price for the good consumed). In most other countries, the CBS would have to include the cost of a standard health insurance policy (provided healthcare is identified as a necessity in the preceding survey, but this is virtually guaranteed). This makes poverty measurement neutral to the structure of welfare provision.

The treatment of means-tested benefits in kind would be slightly more complex, but it can be resolved. Social housing, for example, represents an implicit rent subsidy. Yet since not all households are entitled to social housing, the social housing rent cannot itself be part of the poverty line, as this would underestimate the cost of housing for those who do not

qualify. The CBS poverty line should only be built on the prices of goods that are, in principle, available to everybody. So this issue has to be resolved on the income/expenditure side. It would be too complex to work out for every individual social housing resident what the market rent for their dwelling would be under market conditions. But with the information given in the income/expenditure surveys, it is possible to derive an approximate value. These surveys record tenure and place of residence, so it is possible to work out to what extent private sector rents exceed social housing rents in the respective area, and add the difference to the income/expenditure of social housing residents. In this way, object subsidies would be treated just like subject subsidies, or more precisely, the implicit rent subsidy provided through social housing would be treated as if it was a Housing Benefit payment.[22] In theory, this would already be possible within the current approach to poverty measurement; changing the poverty line is not a prerequisite for changing the treatment of subsidies in kind in the income/expenditure statistics. But within the current approach to poverty measurement, this would create more problem than it would solve. The reason is that the current poverty lines do not incorporate the cost of living (which is precisely what they have been critiqued for here), let alone local variation in it. If implicit subsidies were converted into their explicit monetary equivalence, the income/expenditure of social housing residents in high-rent areas such as London and the Southeast would surge. Especially in Inner London, where the Housing Benefit rate alone is already about equal to the relative poverty line[23], some of these households could suddenly find themselves in the upper income deciles just because of a statistical change. Yet for CBS poverty measurement, this would not pose a problem at all. In high-rent areas, the regional CBS poverty line would also be very high. So even though social housing residents would have very high notional incomes, the CBS poverty line, being built entirely on market prices, would reflect the fact that these notional incomes do not stretch nearly as far as they would elsewhere in the country. A switch to CBS poverty measurement would thus solve two problems at once: The inconsistency of treating benefits in cash different from benefits in kind would disappear, and differences in local purchasing power would be accounted for.

[22] cf. Chapter 3: This is precisely the opposite of the way in which the LCFS currently treats government support with housing costs. At the moment, Housing Benefit is subtracted from rents rather than added to income, so it is treated as if it was a rent rebate, and thus a subsidy in kind. In short, the status quo is to treat benefits in cash as if they were subsidies in kind, while the approach proposed here would treat benefits in kind as if they were benefits in cash.

[23] In 2010/11, the median income for a two-adult household was £419, while the Housing Benefit rate for a one-bedroom flat in most Inner London Boroughs was £240 (57% of the median). Thus, if the full rate is claimed and reported, Housing Benefit alone can already take a household within reach of the poverty line in these boroughs (see IFS, 2012; and LHA Direct, 2012).

In the same way, for elderly individuals, the local price of a standard off-peak bus ticket could be added to income/expenditure. In this way, the monetary equivalent of the Freedom Pass, which is also a benefit in kind, would be added to income/expenditure. Its monetary value would differ a lot across the country, but this is, again, not a problem for CBS poverty measurement, because the cost of the transport component in the CBS basket would differ just as much.

Another potential problem for the CBS poverty line is the treatment of highly irregular expenses. If these are related to an incidence which is insurable, the solution would be to include the price of a standard insurance policy. If they are not insurable, a long-term average would be a second-best solution.

The poverty line, or the separate poverty lines for various household types, would then be the yardstick against which household's living standards are benchmarked. Living standards should be approximated by household expenditure (net of debt repayments), *not* by household income. Chapter 3 has shown that due to volatility and benefit underreporting, income is no longer a reliable guide to living standards at the lower end, while expenditure offers a much better guide. This thesis argues for a complete overhaul of poverty measurement: Not just the poverty line(s) should be replaced, but also the whole way of measuring living standards. The ultimate aim is the redefinition of the 'poverty rate' as the percentage of individuals whose expenditure falls below the CBS poverty line. In other words, 'the poor' would be those who could not afford the full CBS basket even if they dedicated all their expenditure to items included in the basket.

This also means that the poverty status would be unaffected by actual purchasing decisions. Households whose expenditure is above the poverty line, but who nevertheless forego some of the basket's items because they chose to buy different things, are not classified as poor. They could have afforded the whole basket, but chose not to do so. This makes the PSE-based CBS much more flexible than a CMD measure, which is important because the existence of a minimum consensus on what constitutes necessities does not imply that everybody shares the majority view, or will conform to the majority's purchasing decisions. It only means that when a majority classifies an item as a necessity, deviations from this majority view are unlikely to be systematically related to socio-demographic characteristics. But deviations will, of course, occur. Also, there is no reason why there should always be a perfect overlap between what respondents consider necessary in principle, and what they really choose to buy.

Advantages

While not without faults of its own, the PSE-based CBS could avoid many of the shortfalls of conventional poverty measures. Relative indicators change whenever the imputed reference group is changed. This would not be the case for the CBSA. Whether the list of necessities is decided on by consensus of the citizens of Greater London, of England, of the UK, or of North-western Europe is unlikely to make a large difference. Only if societies at very different stages of economic development were amalgamated into a single poverty assessment domain, the approach would cease to be applicable. Countries or regions which differ systematically in popular perceptions of necessities would assemble different CBS-baskets, and ultimately, use different poverty lines – as they should. Presumably, CBS poverty lines of neighbouring country would often be much closer to one another than relative poverty lines, because consumption-related social norms do not abruptly stop at national borders. Guio et al (2009) show that perceptions about what constitutes necessities differ across the EU, but less than what relative poverty lines would imply. Nevertheless, a CBS is a context-specific measure of poverty. It is not absolute, and it would differ between countries as well as over time.

The CBS is not indifferent to inequality, but unlike relative measures, it is not itself a measure of inequality. The CBS depends more on the composition of common spending patterns, not so much on the aggregate level of spending or income. Sometimes a good or service can become a necessity when access becomes more widespread. This happened with telephones in the past and, arguably, with internet access more recently. In these cases, the spread in the ownership rate has changed social interactions. However, there are many goods and services which do not become necessities for social participation, even when ownership becomes near-universal. Whether or not widespread ownership turns an item into necessity depends on the nature of the item. Telephone and internet access represent a polar case, as they are pure examples of 'network goods'. Pure network goods are rare, but many goods and services may have network good-like elements. For example, the LCFS shows that eating out was still an activity reserved for special occasions when the predecessor surveys began, but has now become a common activity. This change has implications for the cost of social participation. In the 1950s, a person who never frequented a restaurant would not have been excluded from a common way of socialising. Today, they would. Eating out has therefore become a different kind of good altogether. Frequenting a restaurant is no longer just about food consumption, it has become a social

venue as well. Thus, even though eating out does not meet any of the textbook criteria of a network good, the parallels are clear. The strength of the CBS is that it can respond to such developments. If a good or service changes social interactions, more people will perceive it as a necessity, and as soon as it has become a necessity in the eyes of half of the population, it would enter the basket. The cost of social participation would have increased, and the poverty measure would have captured it, which is exactly what a poverty measure should do. A consensual basket of necessities is fine-grained enough to differentiate between goods which change social interactions and goods which do not.

This measure would also manage to take the factor time into account. Items enter the list of necessities as soon as they have acquired necessity status in the view of the majority. It is not enough for the item to be affordable for median earners; perceptions of what is a necessity have to catch up as well. If this happens quickly, the poverty line rises quickly, if it takes a longer time lag, then so does the adjustment of the poverty line. A CBS indicator would become more demanding with changing social norms – but it would not mechanistically follow median incomes. Contrary to a relative indicator, a CBS indicator could display falling poverty rates in times of rising inequality in the bottom half of the distribution. This would occur whenever expenditure at the bottom grew faster than social norms adjust upwards. Therefore, the 'Irish paradox' phenomenon would not have occurred if poverty in Ireland had been measured by the CBS method. Presumably, the CBS basket at the end of the high-growth period would not have been very different from the CBS basket at the beginning of the period. Social norms change with rising overall prosperity, but not instantaneously, and not independent of absolute rates of growth. At the very least, an Irish CBS poverty line would not have grown nearly as fast as median incomes.

Relative measures frequently show falling poverty rates during recessions. With a CBS, this would not happen, because the list of necessities is highly unlikely to adjust downwards again in the short term. If at all, only a prolonged decline in living standards might lead to a downwards adjustment, but anomalies like poverty rates falling by several percentage points during a recession would not arise. Under a relative measure, it has happened in every single one of the British post-war recessions.

A CBS would respond to changes in relative prices. If the price of one or several items on the list increased (decreased), then, other things equal, the poverty line would rise (fall) and

a higher (lower) poverty rate would result, even if the inflation rate and the nominal income distribution were unchanged. A BSA-list could also be amended regularly to accommodate emerging low-cost alternatives of hitherto expensive products. It could thus reflect developments in product markets with relevance for low-earners. This would not be as straightforward in practice as it appears here, but it would still be a huge improvement over relative and conventional absolute indicators, which do not incorporate such developments at all.

Qualifications

'Poverty' is and remains a highly abstract concept, and any measurement will suffer from ambiguities, anomalies and inaccuracies. The one proposed here is no exception. To name just a few points:

Not all households have the same needs. People with a health condition that leads to high medical expenses, for example, may end up with a much lower living standard than observable variables reveal. The CBS measure is not fine-grained enough to recognise this.

This argument also holds in reverse. Some households may have non-market means of accessing some of the items in the basket, so they may be able to access the full basket even though their expenditure level is below the basket's cost. The CBS is not fine-grained enough to recognise this either. Taken together, this means that the poverty population identified by the CBS would still not necessarily be those with the lowest living standards. Some of those not included in the poverty population would have lower living standards than some of those included. Attempts to overcome such problems would come at the cost of much greater complexity, which would, in turn, undermine the claim that a CBS poverty measure was easily interpretable.

It is also true that household surveys do not include data on the homeless or on people who live in shelters. Therefore, ironically, the people who are poor in the most obvious way go unnoticed by poverty measures, including the one proposed here.

In addition, no information is provided about the effort people have to make in order to remain above the poverty line. Some people may be able to cross the poverty line, but only through very long working hours or holding more than one job.

Also, even if there was a very solid consensus on what constitutes necessities, this would still not be the same as a consensus on what constitutes poverty. The CBS poverty status would often deviate from people's self-assessed poverty status. There would almost certainly be households who lack the means to afford all the items they have identified as necessities, and who will nevertheless not consider themselves poor. And there will also be households who can comfortably afford all the items they have identified as necessities, and who will still consider themselves poor.

It has been shown how the CBS could detect relevant developments in product markets. It could indeed do so, but only in a rather clumsy way. There is no clear-cut way of establishing whether product X is a low-cost alternative for product Y, or whether it lacks so many of Y's features that it has to be considered a distinct product. Microeconomic theory offers no guideline on where one market ends and another one begins, so decisions would involve discretionary judgements, undermining the aim of non-arbitrariness.

The way in which the CBS would account for in-kind provision is even cruder. When a necessity is publicly provided and free at the point of use, the CBS would price it at zero. However, there is often a large difference between what is officially covered by public provision, and what is actually accessible. If, for example, medicines and healthcare treatments are officially universally available at no direct cost, but strictly rationed and therefore difficult to access in practice, the CBS would have great difficulties in taking this into account. The CBS works best for goods which are bought and sold on markets, because for those goods, increased scarcity takes the form of higher prices rather than waiting lists or indirect means of rationing. The CBS can easily detect rising prices, but it cannot detect more covert ways of rationing; it cannot detect differences in actual availability. In extreme cases, a solution would be to ignore public provision altogether and just assume that people have to buy the respective good on the market, so that the market price would be included in the CBS. But extreme cases are rare. It is more likely that some types of public provision will be readily available while others are not, which may require difficult judgment calls.

Last but not least, much of what has been elaborated here depends on the existence of a minimum common denominator in people's views on what constitutes necessities, with only random deviations from it. The PSE survey suggests that this condition holds, but there is no guarantee that future surveys will repeat this result. It is the case at the moment, but whether it remains to be the case cannot be known.

On a more practical note, it is also a potential disadvantage that the PSE survey is only conducted at irregular intervals. This does not currently pose a large problem: So far, each round of the PSE has produced a basket that was slightly more encompassing than the previous one, but the additions were relatively minor, so that it would not have produced sudden jumps in the poverty line (if a monetary poverty line was available). However, this could have been an idiosyncrasy of the first three rounds. Future rounds might well produce sudden increases, so if the approach to poverty measurement proposed here were to be more widely adapted, the PSE survey or an equivalent would have to be conducted much more regularly.

6.8 Conclusion

Social norms and expectations become more demanding as societies grow wealthier, and social participation can become more costly. Budget Standard Approach measures have largely been discarded in the developed world, partly because they do not recognise this context-dependency of poverty. Instead, relative poverty standards, which define the poverty line as a fixed fraction of mean or median incomes, have become widely accepted in the industrialised world. These indicators respond strongly to redistributive policy measures, but not to overall growth and employment creation (see Chapter 4). Yet since social policy choices usually imply trade-offs and opportunity costs, such conclusions are to be handled with caution. There are reasons to doubt the notion that a poverty standard is automatically anchored in social context only because it is tagged to median incomes. SWB research confirms that individuals do evaluate their material situation to some extent in relative terms, that is, relative to the situation of one or several 'reference groups'. But it seems unlikely that this process of reference group formation follows a generalisable, identifiable pattern. To the very least, we have no reason to assume that national median income earners should occupy an especially prominent space in this process, i.e. that they should be the group which sets social standards for the rest of society.

At the same time, relative poverty indicators do not capture developments in product markets which affect the relative situation of the poor. Price increases which affect the poor disproportionally, e.g. increases in the price of staple food, housing, energy or transport, are not reflected in poverty indicators. Policies which make such increases less (more) likely are not identified as poverty-reducing (increasing) measures. Further, the emergence of 'no-frills' versions of luxury goods is a development which can potentially make everyday life experiences more similar across income strata, but such effects are not identified by relative poverty indicators either.

This chapter has shown that conventional absolute poverty indicators do not solve these problems either. Being tagged to overall inflation rates, they cannot identify any changes in the price or product market structure with particular relevance to the poor. Their level usually has no meaningful interpretation, and they lack a mechanism of adjustment to changes in social norms and expectations.

A combination of a consensual budget standard approach' with a consensual material deprivation survey could go a long way towards meeting these challenges. The poverty line would be equal to the cost of all items on a list of 'essential' goods and services. The items would be obtained through a large-scale survey similar to the PSE, to ensure a degree of social relevance. The survey would yield a number of broad product categories. In identifying specific products for each product category, the list would then be streamlined. In this way, inability to purchase a particular item could be separated from unwillingness to do so, and structural changes in the relevant product markets could be incorporated. Like relative poverty indicators, the CMD poverty line would rise over time. But it would not mechanistically follow changes in median incomes. Under many circumstances, it could deviate substantially from the development of median incomes. One example would be a country where all real incomes remain constant, but through increased cultural integration, exposure to the lifestyles of wealthier countries increases. If this exposure has an impact on domestic social norms, then the list would become more encompassing, and poverty would rise. On the other hand, if all incomes grow fast and social norms only adjust with a substantial time lag, then poverty could fall even if the income distribution widens. Median incomes would grow faster than low incomes, but low incomes would still grow faster than the poverty line. Increased inequality would not have an impact per se, but only if it affects

perceptions of what are necessities. If the additional income growth enjoyed by median income earners vis-à-vis low income earners is channelled into the consumption of goods which have little impact on social norms, then poverty would not necessarily rise. On the other hand, if income inequality reduces slightly, but consumption patterns become more 'rivalling' and positional, then poverty could rise. In the meantime, structural changes in product markets could be reflected by the CBS indicator. Items would regularly be replaced with more suitable substitutes, and market prices frequently updated. This indicator would, as described, still have a number of pitfalls. But it could at least broadly resonate with what most people at a particular time and place associate with 'poverty', and thus provide a more realistic account of how poverty evolves over time, who is affected, and which factors are effective at tackling it. Having presented the outline of the new measurement of poverty, the next chapter will assemble it.

7. Constructing the Consensual Budget Standard

This work was based on data from the Quarterly Price Quotes produced by the Office for National Statistics (ONS) and supplied by the Secure Data Service at the UK Data Archive. The data are Crown Copyright and reproduced with the permission of the controller of HMSO and Queen's Printer for Scotland. The use of the data in this work does not imply the endorsement of ONS or the Secure Data Service at the UK Data Archive in relation to the interpretation or analysis of the data. This work uses research datasets which may not exactly reproduce National Statistics aggregates.

7.1 Introduction

The previous chapter has established the theoretical case for a new poverty measure, namely a consensually established, survey-based Budget Standard Approach. This chapter will proceed to construct such a poverty measure, using actual British price data. It will convert the latest PSE list into a consumption basket, gather the market prices of the goods in this basket, and establish its total cost. The cost of the basket will be the poverty line.

Price data has been gathered in two different ways. The prices of food, clothing, household goods, childcare and social activities have been taken from the price surveys conducted by the Office for National Statistics (ONS). These surveys produce the raw data from which both the Consumer Price Index (CPI) and the Retail Price Index (RPI) are constructed. The data is confidential, which is why no individual prices can be reported here, but only processed composite measures from which the original raw price data could not be reconstructed. The price data has been accessed through the Secure Data Service (SDS), and previously at the offices of the ONS' Virtual Microdata Laboratory (VML). The restrictions mentioned in the opening paragraph apply.

Where the SDS/VML price data was unavailable, insufficient or inappropriate, the poverty line has been built on prices collected directly from local authorities, public transport providers and trade associations.

One important caveat that should be mentioned right from the start is that the latest PSE survey refers to the year 1999. A new round is currently being produced, but at the time of writing, the results were not yet available. In the past, each round of the PSE has produced a slightly longer list of necessities than the previous one, and it is very likely that the new list will not be exactly identical to the 1999 list either. To compensate for this shortcoming, this chapter has tended to 'err on the side of generosity' when judgement calls in interpreting the PSE list were required. Also, a few household electronics that have seen particularly steep increases in ownership rates (e.g. computers) have been added for later years. But this is clearly an *ersatz* solution. The first-best solution would have been a PSE list which is fully up to date.

The road from the PSE to a tangible basket, containing goods and services that people actually buy on the market, is a long one. The PSE identifies many broad product categories, but not many individual goods and services. What is therefore required is a 'middle man', a mechanism to assign individual products to the PSE's broad categories. Chapter 6 has argued that expenditure surveys, like the LCFS, could fulfil this middle-man-function. They will indeed do so in this chapter, but only indirectly, because for the food and clothing baskets, a more suitable candidate has been found: the Market-Based Measure (MBM) compiled by Statistics Canada (see Human Resources and Social Development Canada, 2007 and 2006; Michaud et al, 2004; Human Resources Development Canada, 2003; Hatfield, 2002). The MBM is a poverty measure that shares some similarities with the understanding of poverty advanced in the preceding chapters. Statistics Canada does not explicitly outline the poverty theory on which the MBM is based, but describes the way in which the items have been selected in some detail. Judging from this description, the MBM, too, can be interpreted as an attempt to adjust the BSA method to the conditions of a modern, developed country. The MBM also takes public perceptions into account, albeit in a rather roundabout way: The products are selected according to customary consumption patterns, as recorded in expenditure surveys. The resulting MBM basket is highly encompassing, indeed, the MBM poverty rate is even higher than Canada's relative poverty rate.

But there are differences between the MBM and the measure that will be developed here. The poverty line constructed in this chapter must not be interpreted as a replication of the Canadian MBM with British prices. The MBM is not based on anything resembling the PSE, it does not involve a direct consultation of the public. It is therefore not a CBS at all. Essentially, the MBM is just a very generous reinterpretation of the conventional BSA.

Both the MBM and the CBS developed in this chapter make use of expenditure surveys, but they use them in different ways. The CBS will use them as a bridge between general product categories and concrete products, the MBM uses them to identify these product categories themselves. In the CBS, this latter task will be performed by the PSE.

Nevertheless: For the food and clothing category of the CBS, the MBM subcategories are entirely suitable. The PSE does not specify detailed food or clothing baskets; it outlines only a general description, and the MBM's food and clothing baskets turn out to be fully compatible with this description. It can therefore adequately fulfil the 'middle man' function described above.

7.2 Price data

The prices used in this and the following three subchapters have been taken from the ONS price surveys, the raw data behind the CPI and the RPI. As mentioned, the data is confidential, which is why no individual price can be reported. Price data has been accessed through the Secure Data Service (SDS), and previously at the offices of the ONS' Virtual Microdata Laboratory (VML).

The price survey data is entirely adequate for the prices in the food basket, the clothing basket, household goods, as well as childcare services and some items related to social inclusion. Rent levels in these datasets, however, do not differentiate according to flat size. This is why rents will be collected from Local Housing Allowance Direct (LHA Direct) instead. The LHA Direct rates, i.e. Housing Benefit rates, are available separately for flats with one, two, three, four and five bedrooms. The prices of local transport travelcards will also be collected directly from local transport providers or local authorities, and the price of a household contents insurance will be gathered from the British Insurance Premium Index.

Prices have been recorded separately for each UK region. The choice of the geographical level represents a trade-off. Ideally, a poverty line would take account all local variations in retail structure. If, for example, one town is characterised by intense competition between retailers, while another is dominated by a local oligopoly, then a poverty line should be able to detect this. The ability to capture local variation is one of the great strengths of a CBS poverty line, and one which sets it apart from conventional poverty measures. Hence the case for collecting prices as locally as possible.

But at the same time, regional differentiation increases the complexity of the poverty measure. The compromise chosen here – collecting prices at the regional level – already means that there will be twelve different poverty lines rather than a single one. Breaking it down to the level of the county, or even the municipality, would result in literally hundreds of poverty lines. Going below the regional level may be sensible for items that are intrinsically local and cannot be traded across a distance, resulting in wider price variations. This is the case for housing and local public transport, so these will be collected at the local level. For the other items discussed in this chapter, the 'marginal benefit' (=the increase in precision) of increased localisation does not justify the 'marginal cost' (=the increase in complexity). Hence, their prices will be collected at the regional level, resulting in separate poverty lines for:

- London
- the South East
- the South West
- the East
- the East Midlands
- the West Midlands
- Yorkshire and the Humber
- the North West
- the North
- Wales
- Scotland
- Northern Ireland

A trade-off also arises in the choice of the price range for each product. On the one hand, by definition, a poverty line ought to represent a *minimum* acceptable level. In the context of a CBS poverty line, this would provide a case for selecting a price quote from the bottom of the price range for each product, e.g. the second-cheapest or the third-cheapest product. However, this would violate one of the criteria set out in subchapter 6.1: It would require a level of spending efficiency that is probably difficult to attain is practice. Townsend (1954, p. 133) had once pointed out that it *"would be unrealistic to expect them* [the poor]*, as in effect many social investigators have expected them, to be skilled dieticians with marked tendencies towards Puritanism".* Analogously, it would also be unrealistic to

expect them to be skilled market researchers with market tendencies towards *Homo Oeconomicus* behaviour.

On the other hand, taking the average of all price quotes per item, as the CPI does, would deprive the measure of one of its major potential advantages: the ability to reflect differences in the industry structure of the retail sector. When price quotes are averaged, luxury stores and discounters cancel each other out. A highly diversified market, able to cater to a wide variety of income ranges, could produce the same average price as a market which offers only one standard product. But the actual experience of low-income consumers would clearly differ across the two market structures (see subchapter 5.7 on this issue). The market structure has implications for poverty, and unlike the poverty measures currently in use, the CBS offers the possibility of capturing this. But in order to fulfil this function, it has to concentrate on the lower part of the price range, even if it is advisable to avoid the very bottom of that range.

Putting it simply, the idea is to devise a basket for a consumer who is price-conscious, but not a 'bargain hunter'. The CBS ought to be a low-budget basket which does not require the consumer to be particularly well-informed, or to make an especial effort to find the cheapest items. To put this idea into practice, prices at the 25th percentile of the price distribution have been selected. This means that a consumer who commands over this budget could theoretically afford one out of four products within each product category. Since this choice is somewhat arbitrary, price quotes at the 20th and the 33rd percentiles of the price distribution have also been selected, to allow a sensitivity analysis. This produces two alternative poverty lines, a more generous one which could afford one out of every three products per category, and a less generous one which could only afford one out of every five products. The result is a BSA basket which captures some of the possibilities of 'economy class' shopping, while still leaving substantial efficiency reserves.

This choice requires some explanation, because differentiation could also work in the opposite direction. Subchapter 5.7 has described a differentiated market in which the low-budget segment of the market caters specifically for the needs of low-budget consumers. They thereby obtain an 'economy class' shopping basket which, while being lower in quality and lacking some product features, is a lot more similar to the shopping basket obtained by middle-income consumers than it would have been if product markets were more homogeneous. Market differentiation, in this case, moderates inequalities in consumption standards. In theory, however, differentiation could also have the opposite effect of

exacerbating such inequalities. This would happen when a market offers different packages, some representing better value for money than others, and when the better-value packages are, for whichever reason, less accessible to low-budget consumers. The result would be a 'poverty premium', a situation in which low-income consumers pay more than the majority of consumers for a given standard of consumption. The term goes back to Caplovitz's (1967), who identified various instances in which the poor paid higher prices than most people for comparable products.

Poverty premiums may still exist, but they are no longer the same ones as those identified by Caplovitz. The author describes a highly fragmented retail market structure characterised by high search costs, in which consumer groups that are less mobile and less knowledgeable are systematically disadvantaged. Yet the author's description predates the modern retail market, with its dense networks of large discount supermarket chains. The emergence of the current market structure has minimised search costs, because nowadays, each supermarket chain is associated with a particular price and quality level. By the simple act of choosing one supermarket chain over another, customers are making a choice about the price level they are prepared to pay across the board. It is no longer necessary to do this separately for each individual product category. Thus, 'low-budget shopping' in the way in which the term is used here does not require the incurrence of search costs. It is sufficient to choose a discount chain (e.g. Aldi, Lidl, Netto, Iceland, Asda) over a more upmarket one (e.g. Marks & Spencer). Even where no discount store is within reach, consumers can still opt for the low-budget in-house brand of the nearest supermarket, an option which does not require the incurrence of search costs either. This is why, at least for products which can be bought and sold in such outlets, the use of prices at the 25th percentile of the price distribution is justifiable. There is nothing special about the 25th percentile as such, but the idea that a CBS budget should afford one out of four products on the market is a good enough rule of thumb for a prototype. At least in urban areas, it should be feasible for virtually every household to adhere to this consumption pattern with minimal search costs. The Competition Commission provides comprehensive data on the density of retail store networks, and the accessibility of those stores, in the UK. It shows that in urban areas, virtually all households have at least one large grocery store within a driving distance of 10 minutes or less from their home (Competition Commission, 2008, pp. 45-46).[24] Within a drive-time of 25 minutes, virtually all urban households have access to at

[24] CBS shoppers are assumed to have no car, but given average urban driving speed, a driving distance of ten minutes should also represent a walkable distance, in case the supermarket is not serviced by public transport.

least three large grocery stores (ibid.). Even in rural areas, nine out of ten households have access to at least one large store within a driving distance of just over twenty minutes, and to at least two large stores within a driving distance of just under thirty minutes.

However, even if the poverty premiums of Caplovitz' days no longer apply, they may simply have been replaced by other poverty premiums. Indeed, Hirsch (2013) examines this issue using contemporary UK data, and finds evidence for the existence of poverty premiums in today's markets. They arise because of differences in internet use, and in access to financial services. For example, a short-term loan from a bank comes at a much lower cost than an equivalent loan from a payday lender, and for utility services, the more attractive tariffs are often reserved for online payments.

Still, the poverty premiums that Hirsch identifies do not undermine the idea of selecting CBS prices mostly at the 25th percentile of the price distribution. If the poor face higher borrowing costs than most households, then in the approach proposed here, this would be accounted for in the consumption figures. Debt and interest payments are subtracted from expenditure, so other things equal, a household repaying a bank loan would attain a higher consumption standard than an otherwise identical household repaying an equivalent payday loan. Thus, adjusting the poverty line for differences in financing costs would represent a form of double-counting. Of course, a poverty measurement should be able to take account of the fact that some households are more credit-constrained than others, but it is more appropriate to deal with this issue in the consumption data, not through the poverty line. A person who buys a fridge using an unsecured high-interest loan pays more than a person buying the same fridge using a short-term bank loan – but the first person does not pay more for the fridge itself. They pay more for the 'package', that is, the product plus the financing costs, but it would be misleading to add those costs to the cost of the fridge. An increase in the use of unsecured loans indicates a problem with the financial situation of low-income households – not a problem in the market for household appliances. A poverty measure should detect the problem, but it should also be able to correctly ascribe it to its source. In other words, insofar as poverty premiums arise in the form of financing cost premiums, they are already dealt with in the expenditure data.

The other poverty premiums Hirsch identifies relate to genuine price differences, rather than differences in financing costs. But they do not constitute a problem for the price collection method chosen here either, because the CBS that will be constructed in this chapter will not contain any prices that refer to online payments. Thus, the CBS that will be

built here differs from Hirsch's study insofar as it uses a different baseline. In Hirsch's study, the low price of online payment packages is defined as the 'normal' price, and sums which exceed this baseline are classified as 'penalties'. In this chapter, the higher 'offline price' is defined as the baseline, and sums which fall below that are considered 'discounts' – and therefore ignored, because the CBS will not contain discounts, other than child discounts for transport ticket prices.

For the fuel budget, an estimate which contains a 'poverty premium' as defined by Hirsch has been chosen. For a few other categories – in particular, household contents insurance – average prices rather than prices at a lower percentile have been selected. For the majority of products, though, the use of prices at the 25th percentile is defensible. Poverty penalties are real, but they do not occur across the board. In the final chapter, proposals for a more sophisticated approach in future research will be presented.

In what follows, the individual components of the CBS poverty line will be described.

7.3 The food poverty line

As mentioned, for the food component of the CBS, the food basket of the Canadian MBM will be adopted with minor modifications. The reason is that the PSE does not contain a food basket as such. It contains the following entries:

- 'Two meals a day'
- 'Fresh fruit and vegetables daily'
- 'Meat, fish or vegetarian equivalent every other day'
- 'Friends or family round for a meal'
- 'Roast joint/vegetarian equivalent once a week'
- 'Three meals a day for children'
- 'Meat, fish or vegetarian equivalent at least twice a day for children'

The MBM food basket clearly covers all of these components, so it is fully compatible with the PSE in this regard. It has been selected for three reasons:

1. The MBM food basket is easily compatible with the poverty theory used here, even if it is not explicitly built on any particular theory of poverty. As Statistics Canada

explains, the MBM food basket *"is neither "an ideal diet" nor the cheapest diet which meets nutritional requirements. Instead, it represents a nutritious diet which is consistent with the food purchases of ordinary Canadian households. It contains healthy foods that "people like to eat""* (Human Resources and Social Development Canada, 2007, p. 55; Human Resources Development Canada, 2003, p. 37). This means that the MBM avoids the pitfalls of the historical BSA, even if that was not its intention. The MBM does not require consumers to be 'skilled dieticians', and it does not assume 'marked tendencies towards Puritanism' either. It is modelled on actually observed eating habits rather than some idealised notion.

2. Prior to gathering the individual prices, the MBM has been compared to typical food purchases in the UK as recorded in the LCFS. No major differences have been found. The reason for this is that the MBM does not contain any national or regional or specialties; it does not represent a specifically 'Canadian cuisine'. Rather, it is a generic 'Western' diet that would fit a range of developed countries.
3. The MBM food basket is not ascetic, it is not a 'poverty diet'. It contains a wide variety of meats, fish, fresh vegetables, fresh fruit, dairy products etc. This is desirable: Poverty in developed Western countries is no longer a matter of physical deprivation, and poverty measurement should reflect this. The MBM food basket is a food standard designed for a highly developed country. It would certainly be possible to use a more economical food basket, but this would create problems of its own. Firstly, the PSE survey identifies celebrations on special occasions as a necessity. With a more economic diet, this would require additional allowances for special food items for these occasions, which would involve discretionary choices. The MBM, in contrast, is comprehensive enough to cover this automatically. It could also be argued that the spread of take-away food is a development which has changed social norms, and which a CBS food basket should take account of. With a more economic basket, this would also require a discretionary separate allowance. This is not necessary when using the MBM, which is, again, broad enough to accommodate substitutions of this kind.

The items in the MBM food basket have been matched with their closest equivalent in the UK price data. In a few cases, no adequate match has been found, in which case the item has been dropped, and the quantity of an already selected similar item has been increased accordingly. This means that the food basket developed here is slightly less diverse than its

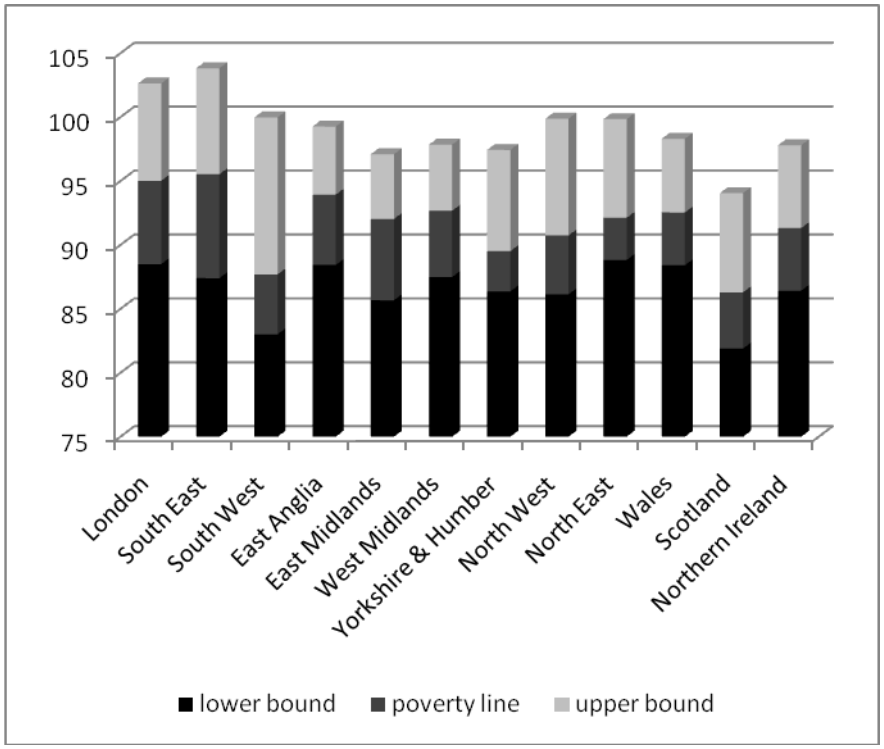
Canadian counterpart (see Annex), but a decrease in variability is preferable to making arbitrary choices.

In some cases, prices have been missing for some years, in which case the prices of the previous and the subsequent year have been averaged. Some items have been dropped from the CPI halfway during the period covered here. In this case, a substitute has been used from then on. In cases where substitution would have led to an unreasonably sharp drop or increase in price, the price has been updated or deflated by the relevant subcomponent of the CPI. The reference household in the Canadian MBM is a family of two adults and two children. By implication, this is also initially the case for the CBS food basket.

The evolution of the food poverty line for different household types

Twelve different food poverty lines result, one for each UK region. They are shown below for a family of four in 2009, with the upper bound (prices at the 33rd percentile) and the lower bound (prices at the 20th percentile) also included.

Figure 7.1: Food poverty lines for a family of four, 2009, in £ per week



The Southeast of England comes out as the costliest region on this basis. In 2009, a family of four would have required a weekly sum of £95.53 to purchase the full food basket (when using prices at the 25th percentile).

Statistics Canada uses a standard equivalence scale to extend the food poverty lines to other household types, but this approach has not been adopted here. Equivalence scales reflect economies of scale in household consumption, but for the vast majority of households, the largest source of economies of scale is housing. In food consumption, economies of scale are very minor.

An equivalence scale which avoids this problem is the McClements scale, because for this scale, there is an after-housing-costs (AHC) version, with weights which reflect the fact that economies of scale have already been largely exhausted. Based on this version of the McClements' scale, Figure 7.2 shows the food poverty lines for five different household types in the Southeast region, and their evolution in the period from 1996 to 2009. The Southeast is best suited for times series comparisons, because this region has broadly maintained its position in the regional price ranking throughout the period. The trend in the Southeast is therefore representative of the trend in many other regions as well.

Figure 7.2: The food poverty line in the Southeast, £ per week, various household types, 1996-2009

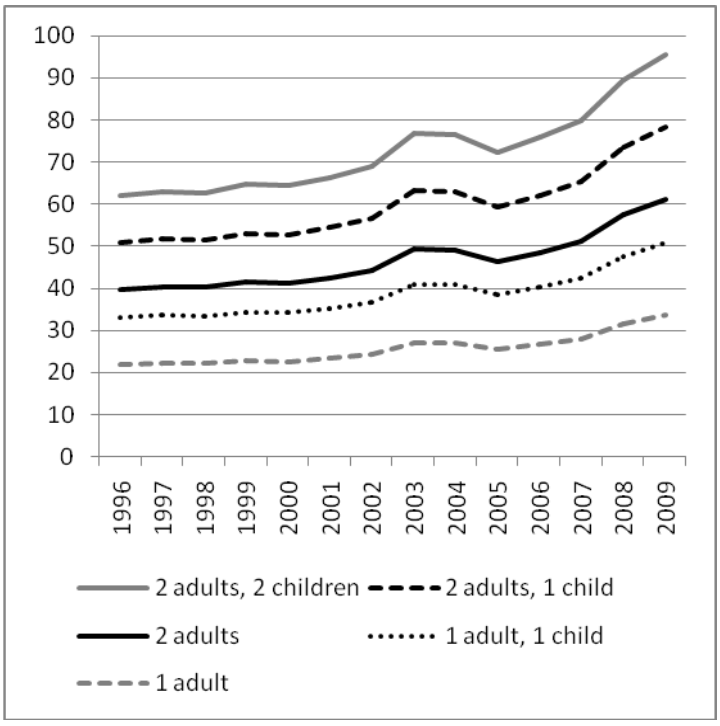
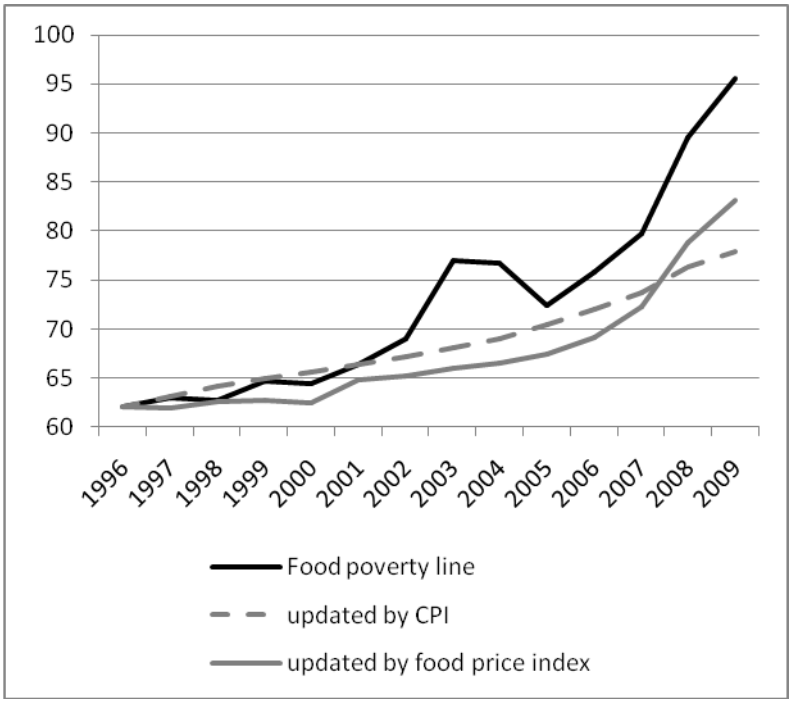


Figure 7.3 provides some context for these figures. It shows, again, the cost of the food basket for a family of four in the Southeast of England, for the period between 1996 and 2009. Alongside with the actual trajectory of the food poverty line, the dotted grey line shows a hypothetical one which would have resulted if the cost of the food basket had only

increased in line with the general rate of inflation. Up until 2001, there is not much difference between this hypothetical scenario and the actual evolution of the food basket's cost. But from then on, and especially since 2005, the cost of the food basket has risen sharply in real terms. This shows, again, how little the rate of CPI inflation reveals about the cost of the basic necessities which make up an especially large proportion of low-earners' budgets.

The solid grey line shows another hypothetical cost evolution of the food basket, this time simulating a situation in which it rises in line with the Food Price Index, which is the food subcomponent of the CPI. For obvious reasons, this simulation is much closer to how the cost of the food basket has actually evolved. But a gap between the two remains. This suggests that even within the food price category, price changes have been unfavourable for low-earners, with more basic foodstuffs increasing at a faster rate than food prices on the whole. This is compatible with the observation that the Food Price Index shows especially steep increases for basic products like cereal and fruits.

Figure 7.3: The food poverty line for a family of four in the Southeast: £ per week, actual and hypothetical



Regional variation

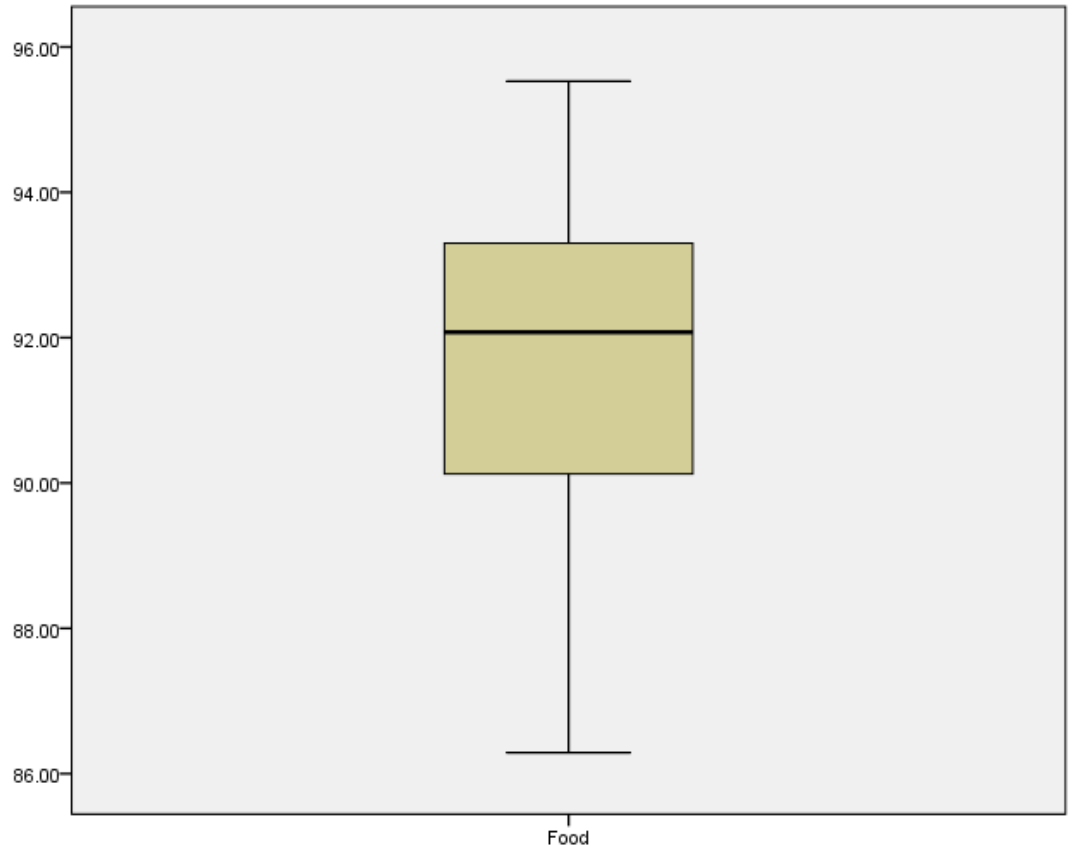
There is considerable regional variation in the cost of the CBS food basket. A 95% confidence interval for the national mean (in 2009) has been calculated, and it turns out

that the three costliest regions are above the interval's upper bound, while three least costly regions are below its lower bound.

The Southeast tops the regional ranking. In 2009, a family of four would have required a weekly sum of £95.53 to purchase the full food basket. The cost of the food basket has been lowest in Scotland, where an equivalent family could have purchased an equivalent basket for £86.29 a week. This amounts to a spread of ten per cent, which adds up to a difference of nearly £500 over a course of a year.

Regional variation is not explained by a few atypical regions. When representing the regional variation in food basket costs in the form of a standard boxplot, all regions fall inside that range.

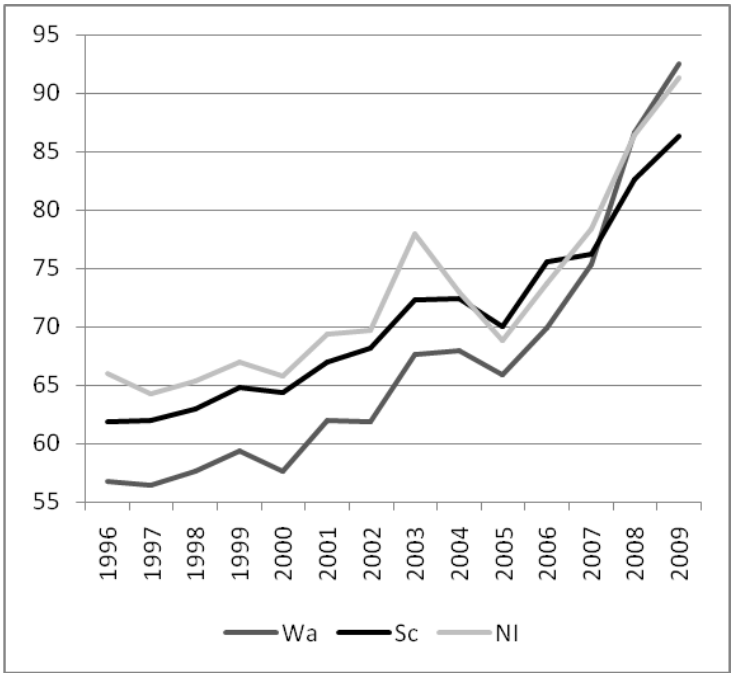
Figure 7.4: Boxplot for the regional variation in food poverty lines, 2009



The ranking of regions by the cost of the food basket has remained broadly similar over the years, but there are exceptions. In 1996, the region which recorded the highest cost for the food basket was Northern Ireland, which is now among the low-cost regions. Similarly,

Scotland was among the high-price regions in 1996, and is now at the bottom of the price ranking. In contrast, Wales recorded the lowest food poverty line in 1996, and is now in the middle of the regional ranking.

Figure 7.5: The food poverty lines in Wales, Scotland and Northern Ireland, £ per week, 1996-2009



This suggests is that it might be worthwhile exploring how the industry structure of the retail sector has changed over this period, and whether Northern Ireland and Scotland have been outliers in some sense.

7.4 The clothing poverty line

The clothing basket is constructed in a similar way to the food basket: The PSE provides the general categories, and since the clothing basket of the Canadian MBM fits this general description, it has been taken for the detailed specification. Again, the MBM clothing basket has been selected in a way which is compatible with the understanding of poverty used here. It *"reflected an effort to provide clothing and footwear for common work, school and social occasions"* (Human Resources and Social Development Canada, 2007, p. 56). This shows that the social participation aspect is also an important consideration for the MBM.

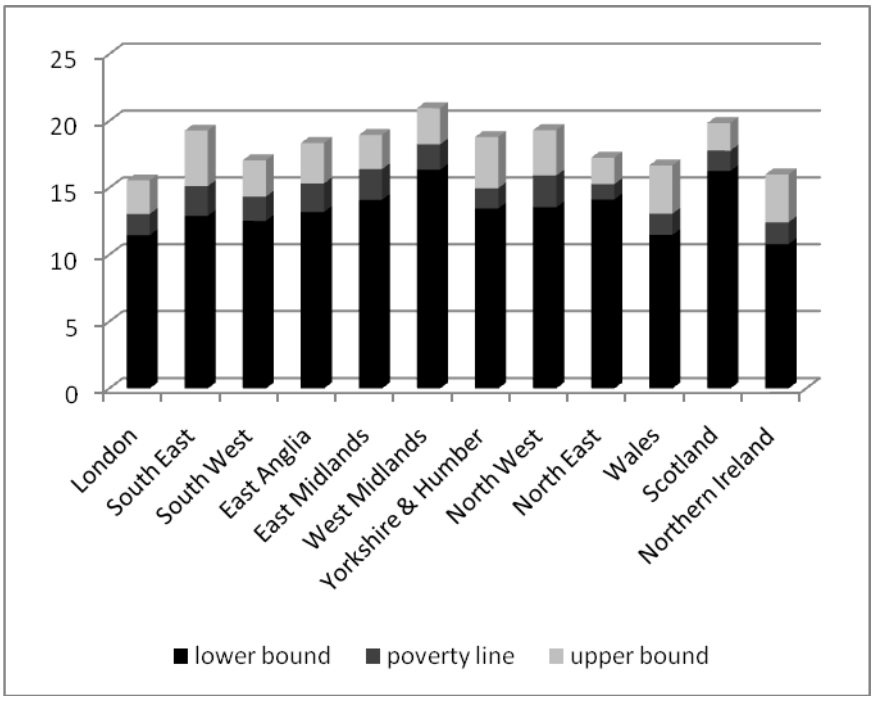
The standard of clothing must be suitable protect from cold and the weathers, but while these functional qualities are necessary, they are not sufficient. Clothing must also be suitable to meet social expectations as perceived by the respondents. This is the common understanding behind both the MBM and the CBS.

Unlike in the food category, however, the compatibility of the MBM with the PSE is not perfect: The PSE demands a slightly more generous standard for children's clothing than the MBM. In these cases, the PSE overrides the MBM. A consensual BSA must be based on what *respondents* deem necessary, not poverty researchers. The role of the latter is only to find specific items which match the respondents' general description.

As above, the nearest matches in the ONS price data have been selected, assembling a clothing basket which comes as close to the MBM's clothing basket as British price data permit. The quality and suitability of these items cannot be assessed on this basis, but preference has been given to items which contained signal terms like 'branded', 'fashion', 'suitable for work' or 'suitable for school'. The prices of these items have been collected at the regional level, and at the 25th percentile of the price distribution. As above, prices at the 20th and the 33rd percentile have also been selected as lower and upper bounds.

The reference household is, again, a family of two adults and two children. The 2009 clothing poverty lines for the reference household are shown below for all regions, including upper and lower bound. As in the food subchapter, the South East comes out as the costliest region. On an annual basis, a family of four in the South East needs £786.68 to buy the whole clothing basket, which translates into a weekly clothing poverty line of £15.13.

Figure 7.6: The clothing poverty line for a family of four, 2009, in £ per week

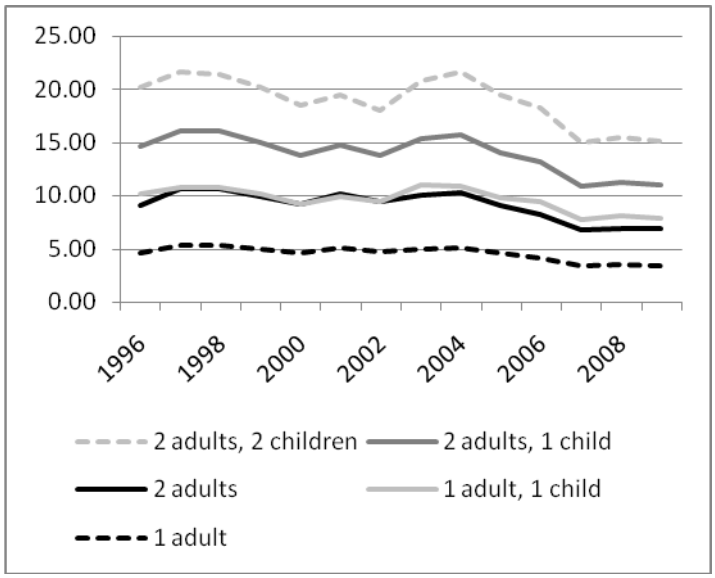


The MBM applies a common equivalence scale to the total poverty line, but this practice has not been followed here, because a higher level of precision can be achieved without much further complication. In the clothing basket, each item is allocated to one specific household member, so the basket for e.g. a childless couple can simply be derived by taking the baseline basket and removing the items assigned to the children. The clothing poverty line has therefore been gathered separately for each household type, without the use of an equivalence scale. This produces an implicit equivalence scale, but it does not have to be a constant one.

The evolution of this poverty line from 1996 to 2009 is shown in the graph below. The South East has been selected to illustrate the trend because, again, while it is not a typical region in terms of its price level, its trend is broadly representative of the trend in many other regions as well. It shows that in nominal terms, the cost of the clothing basket is now lower than it was in 1996, and this is true for all household types, albeit not to the same extent. This time, the poverty lines are not exactly parallel to one another, as the implicit equivalence scale has changed over time. The cost of clothing a child is now a bit higher than the cost of clothing an adult. This shows the inappropriateness of applying a conventional equivalence scale to this category. A conventional equivalence scale would imply that there are economies of scale in clothing consumption, but calculating a poverty

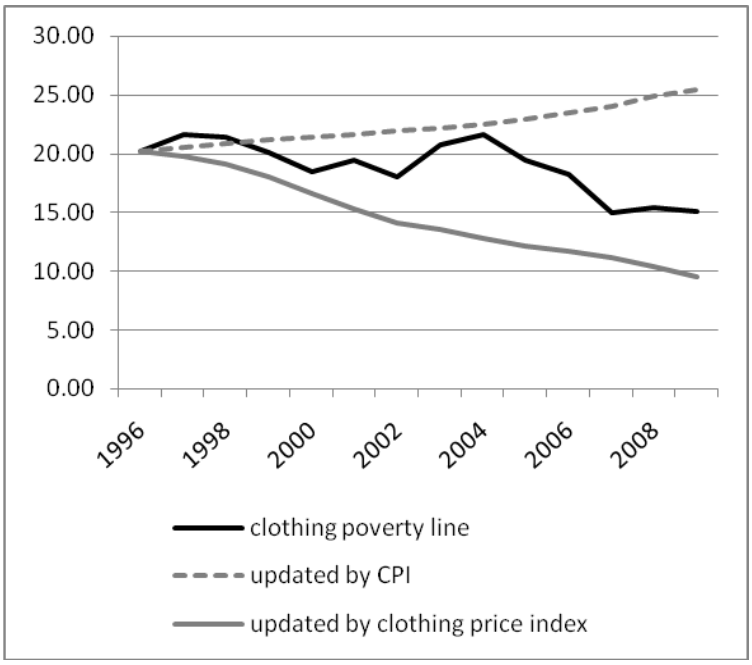
line for each household type separately shows that a family of four needs 4.4 times as much as a single adult to purchase its clothing basket, and 2.2 times as much as a childless couple.

Figure 7.7: The clothing poverty line in the Southeast, £ per week, various household types, 1996-2009



The graph below puts the figures into perspective. The dotted line shows how the clothing poverty line would have developed if it had risen in line with the overall rate of inflation. This shows that the clothing basket has become considerably cheaper in real terms over time. It also shows that the cost of the clothing basket shows no correlation with the overall CPI, casting, once again, doubt on the practice of updating poverty lines by the general rate of inflation. The solid grey line shows how the cost of the clothing basket would have evolved if it had grown in line with the clothing component of the CPI. This scenario is, unsurprisingly, much closer to what has actually happened. Still, even the clothing price index misses a few subtleties.

Figure 7.8: The clothing poverty line for a family of four in the Southeast, £ per week, actual and hypothetical

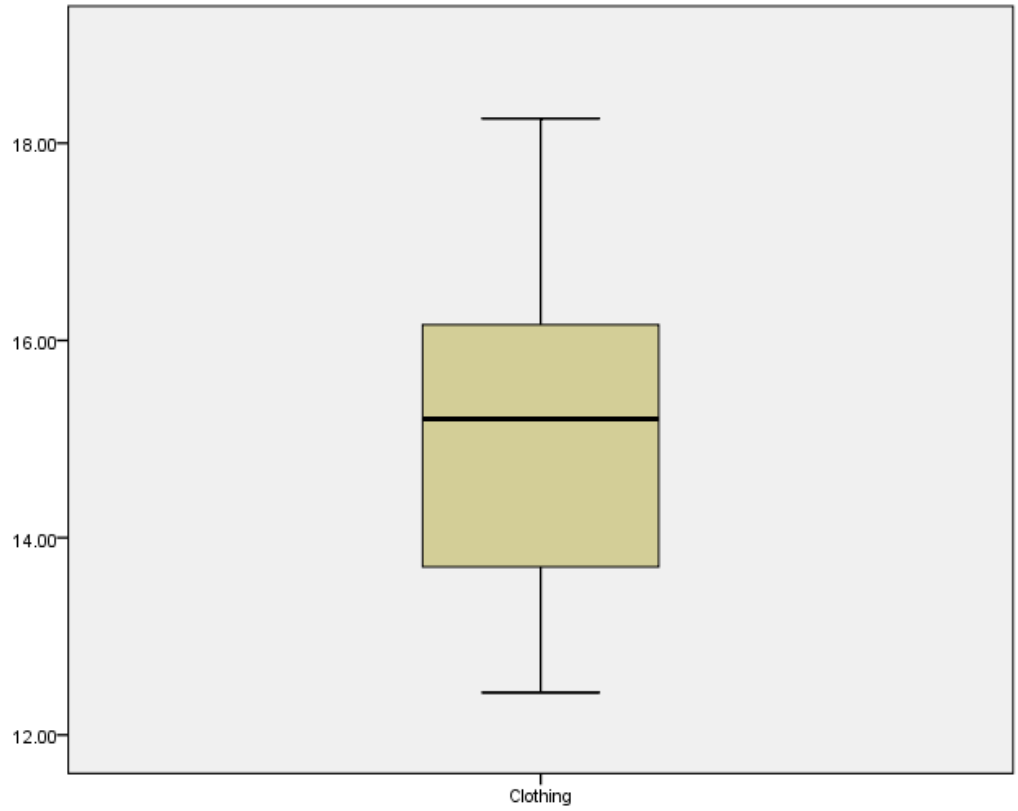


Regional variation

A 95% confidence interval has been calculated for the national mean cost of the clothing basket. The two least costly regions are below the interval's lower bound, and the three costliest regions are above its upper bound.

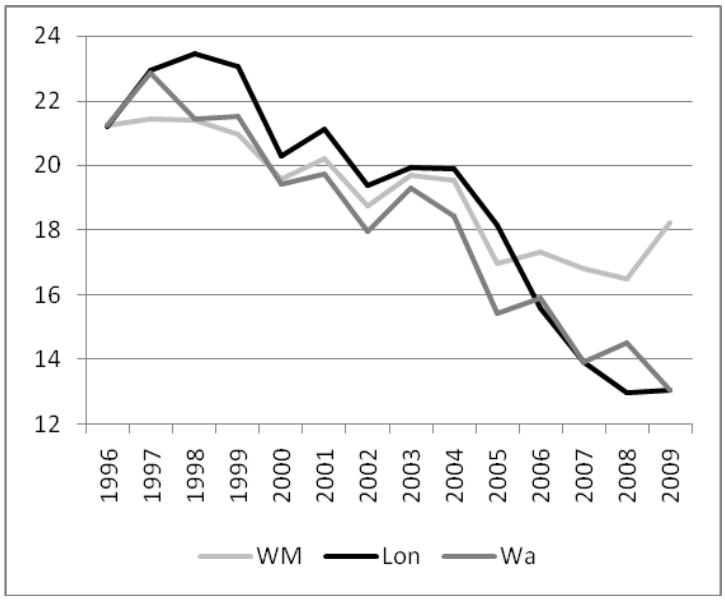
While there has been a modest regional convergence of food poverty lines, the opposite has happened for clothing poverty lines. The spread between the costliest (the West Midlands) and the least costly region (Northern Ireland) has increased from 10% to 33%. In absolute terms, it adds up to just over £300 per annum for a family of four. But again, these two regions are not driving the variation alone. All regions remain within the range of a standard boxplot.

Figure 7.9: Boxplot for the regional variation in clothing poverty lines, 2009



There have also been changes in the regional ranking. As the graph below shows, in 1996, the cost of the clothing basket (for a family of four) in Wales, London and the West Midlands was virtually identical. But from 2000 on, London and Wales continued the downward trend while the West Midlands did not. There is no obvious answer as to why this happened, but if differences persist, the structure of the clothing retail sector may again be a plausible candidate.

Figure 7.10: The clothing poverty lines in the West Midlands, £ per week, London and Wales, 1996-2009



7.5 The poverty line for household goods, personal services and social participation

Household goods and personal services

The PSE contains a few consumer durables and household electronics, the prices of which have been included here. For each of these, a duration of two years – the legal minimum warranty period – has been assumed. Many items will surely last longer than that, but limiting the period to the legal minimum avoids the arbitrariness associated with including the price of repair services, or with making a more sophisticated price-quality trade-off. Also, it is a potential weakness of BSA poverty lines that they find it difficult to accommodate expenditure shocks, i.e. expenses which are sudden, unexpected and irregular. Expenses associated with durables breaking down fit into this category. Historical BSAs have often been based too much on 'if-all-goes-well' conditions, and too little on 'Murphy's law' conditions. This added to their difficulties in capturing real-world situations.

The PSE also identifies home contents insurance as a necessity. This item is not included in the ONS' local price data survey, so the prices have been gleaned from the British Insurance Premium Index instead (AA, 2012). The BIPI contains home content insurance premiums for

the national level and for some selected regions, with regional variation being mostly explained by differences in climatic conditions (risk of flooding etc.). Where available, the regional premium has been taken for the CBS basket, and where none was available, the national figure has been taken as a second-best solution. For this product, the average premium rather than a low-cost insurance has been chosen: A lower price may imply a lower level of insurance coverage, which could then entail other expenses in the event of damage.

Kitchen equipment and cleaning utensils are not included in the PSE, but a few basic items in these categories have been included here for the sake of completeness. This poses no major difficulties because these are either low-cost items, or they are items which last for a longer period, so that their cost is negligible when converted to a weekly basis. This component of the CBS basket also includes allowances for personal services like a haircut once every two months.

Childcare

Households with children have been assumed to require full-time childcare. But it has also been assumed that they qualify for the childcare element of the Working Tax Credit (WTC), which reimburses 80% of all formal childcare costs, subject to a cap.[25] Hence, childcare services have been budgeted at 20% of the market price. This is surely not fully accurate. It will underestimate the childcare costs of families who do not qualify for the full amount of the WTC childcare element, and it will overestimate the childcare costs of families whose children are 3 or 4 years old, because they qualify automatically for 15 hours of free childcare under the Early Education programme. The childcare costs of families who can access employer-sponsored childcare or childcare vouchers will also be overestimated. However, given the huge diversity in childcare requirements and funding arrangements, some simplification is necessary in this category. The treatment of the WTC childcare element as a cost rebate rather than an income source is defensible on the grounds that it is an earmarked transfer, which cannot be spent on anything other than childcare.

Social participation

Unfortunately, in the field where a detailed account would be most useful – social participation – the PSE is at its most general. The most important entry in this field reads ‘a

[25] In the beginning of the period, the WTC childcare element reimbursed only 70% of childcare costs. More recently, it has been cut back to this level again.

hobby or leisure activity'. This part of the basket will therefore be the least precise one, which could, however, be changed if future rounds of the PSE specified more detailed activities.

In actual practice, the PSE's lack of precision in the social participation category proves less of a problem. The LCFS has been used to identify a few standard leisure activities that are reasonably common, and which have therefore been included in the CBS. These are:

- Membership in a health centre/ fitness club
- A meal in a restaurant once a month, including drinks
- Admission to a theatre once a month

These activities have not been chosen for their own merits – no single activity is widespread enough to be included on this basis alone – but simply on the grounds that the prices of these activities (especially the first one) display a number of useful characteristics. First of all, compared to other leisure activities for which price quotes are available, these activities are among the costlier ones, albeit not at the very top of the price range. This means that a whole range of alternatives is affordable on the same budget, or a lower one. So while the selection of the items as such is fairly arbitrary, this matters less than in the case of goods which are not substitutable, such as housing or transport. The resulting sub-poverty line which acts mostly as a generic budget. Membership in a health centre or fitness club is mostly a placeholder: It can be replaced by almost any social activity which involves membership in a club, association or society (except high-end ones like golf clubs) without extra costs, and it most cases, at a lower cost. So this entry could as well have been named 'membership in a club/society/association'.

Secondly, the advantage of membership in a health club/fitness centre is that is represents a flat rate purchase. For activities which are bought in discrete units, a discretionary choice about the quantity and frequency of the purchase is required. In this case, once the membership fee has been paid, it allows unlimited access to the premises and to any activity within them. This is also the reason why restricted membership options, which limit access to particular times of the day and/or which exclude some of the activities offered on the premises, have not been considered. In some places, local authorities run their own health clubs, which offer membership at subsidised rates. However, their availability and access criteria differ too widely, so this option has been ignored, even though it will often

be the preferred option for low-income households. The rates included here refer to private health centres only.

Unsurprisingly, restaurant prices differ widely in any given region, but for this item, the usual distinction between prices at the 20th, the 25th, and the 33rd percentiles has not been made. Instead, only the median price has been taken. There are two reasons for this. Firstly, as in the case of club membership, the idea is to find a placeholder activity which has many substitutes in the same or a lower price range. Restaurant meals fulfil this function on average, but not at the lower percentiles of the price range. When the median price is taken, all close substitutes – pubs, cafes etc. – and some more distant ones are comfortably within the reach of the same budget. Secondly, the emphasis here is on the social participation function, not on the activity per se. Restaurant visits have been interpreted to be primarily a socialising activity: It has been assumed that their main purpose is not food consumption, but meeting other people in a public venue. In order to fulfil this function properly, the budget must allow low-income households to frequent the same places as most other people. The price has therefore been interpreted as a kind of entry ticket to a social venue.

There is no especial reason for the inclusion of theatre visits. It is, again, only a placeholder, because a price comparison within the ONS price surveys shows that it can be replaced by many other activities – visits to cinemas, museums, sports events etc. – even though for this item, it is more of a second-best solution. The case is less clear-cut than for the above items, because all of the activities in this category show considerable price variation within a given region.

A number of problems remain. Even if the activities included are treated as placeholders rather than taken at face value, the social participation category is not especially realistic. Firstly, it treats children as 'miniature adults', who simply accompany their parents to every social activity rather than engaging in age-appropriate activities. The CBS basket contains no leisure activities suitable for children. The result is that the social participation budget for a single parent with one child is identical to that of a childless couple, which is scarcely plausible. However, while it is relatively easy to identify a few standard leisure services for adults, the number of possibilities for children is vastly greater, and the PSE survey is too general on this account. It is simply not possible to compose a 'children's hobbies and activities' basket with any degree of objectivity here, so what the above approach effectively does is to derive a budget for adults only, and then assign the same figures to

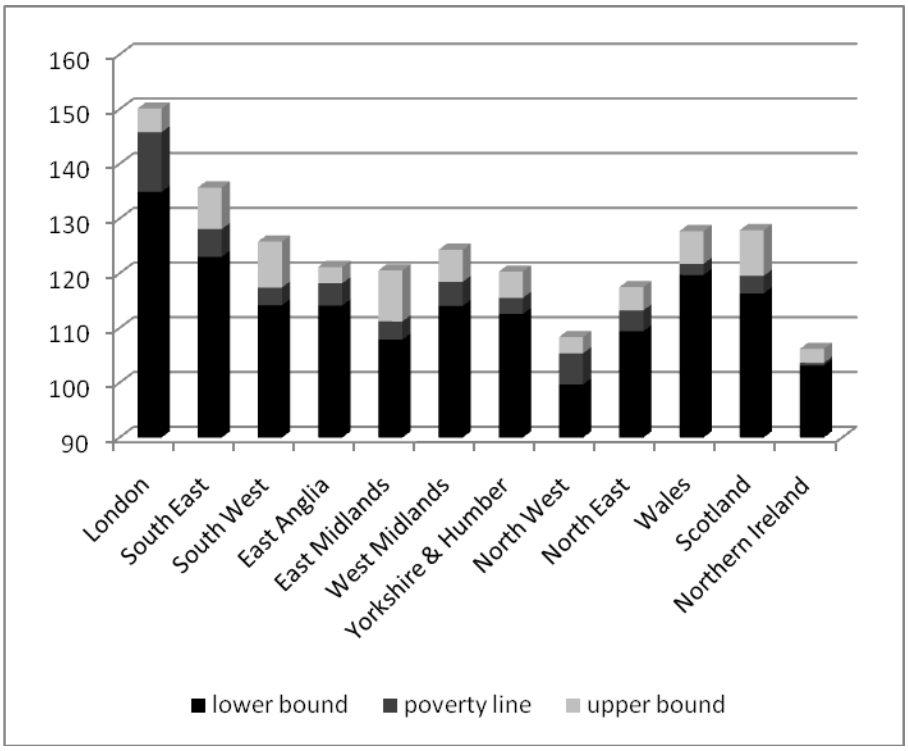
children. Since a whole range of substitutes are within reach of this budget, this approach, although not particularly elegant, is defensible on an as-if-basis.

Secondly, this budget assumes a family which only engages in social activities that take place outside of the home, and that involve the purchase of leisure services on the market. Activities that require only one-off payments, or that take place outside of the realm of market exchange altogether, are not considered. This assumes, quite unrealistically, that every social activity must be bought on the market. However, the idea is to produce a 'flat-rate budget', which can be rearranged to cover spending on special occasions as the case arises. The PSE lists the celebration of special occasions as a necessity, but it is not feasible to derive separate budgets for every possible occasion here. However, some of the activities specified above would also be realistic activities for special occasions. Effectively, the above approach attempts to devise a social participation budget which automatically subsumes such occasions. It may not be a realistic spending pattern for every single month of the year, but it allows enough substitution and rearrangement to also cover irregular events. It is, again, not a particularly elegant solution, but it obviates the need for separate 'special events budgets' for all sorts of occasions.

Thirdly, even though this is only a matter of semantics, it should also be mentioned that the labels 'social participation' or 'social inclusion' for this category are somewhat misleading. It implies that social participation/inclusion was one single, isolated component of the basket, when in reality, it is the leitmotiv that permeates *all* components of the basket. The poverty line *as a whole* ought to approximate the cost of social participation, defined as not just socialising, but the attainment of a customary living standard. The label has been chosen to flag out that the items in this category are not purchased in their own right, but as a means to participate in society. But it should be noted that this deviates from the way in which the terms 'social inclusion' and 'social participation' are used elsewhere in this thesis.

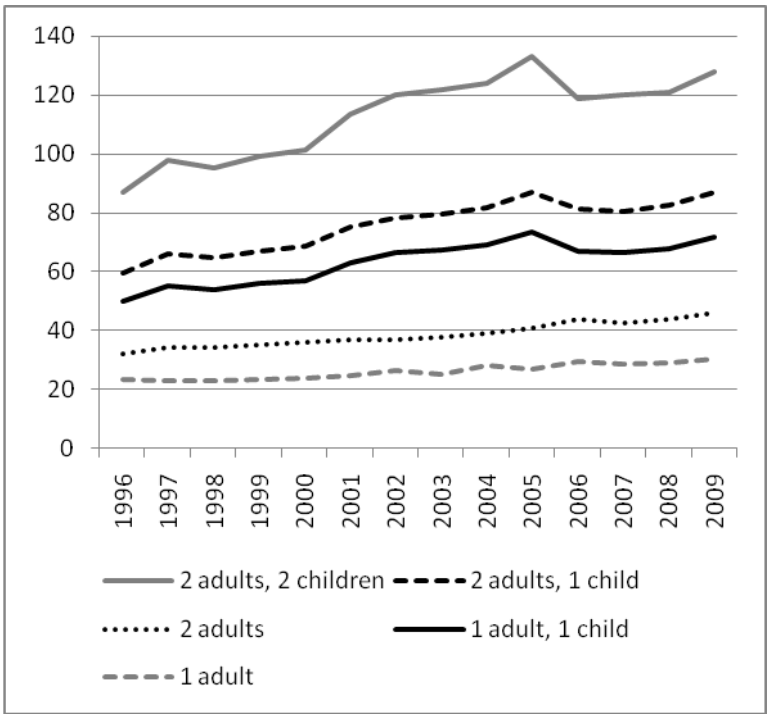
For a family of four, the 2009 total budget for household goods, personal services and social participation is shown below. What is immediately apparent is that for this component of the basket, the extent of regional variation is much higher than for the previous components. This variation is mostly driven by the difference in the cost of socialising activities.

Figure 7.11: The budget for household goods, services and social participation for a family of four, 2009, in £ per week



As in the case of the clothing basket, each activity is assigned to a specific household member, so no equivalence scale is required. Figure 7.10 shows the budgets for each household type, and their evolution between 1996 and 2009. As above, these figures refer to the Southeast, because this is the most typical region as far as price trends over time are concerned. It shows immediately that child-related expenses have experienced the greatest cost increases. In the late 1990s, a family of four needed 4.3 times as much as a single adult to attain the same living standard. In 2009, that ratio had increased to 5.0. This reflects the increase in childcare costs, which has made the implicit equivalence scale less favourable for families with children. The drop in 2006 reflects the increase in the proportion of childcare costs reimbursed through the WTC, which was raised from 70% to 80% in that year. This has made a visible difference, but it has not halted the overall trend.

Figure 7.12: The poverty line for household goods, personal services and social participation in the Southeast, £ per week, 1996-2009



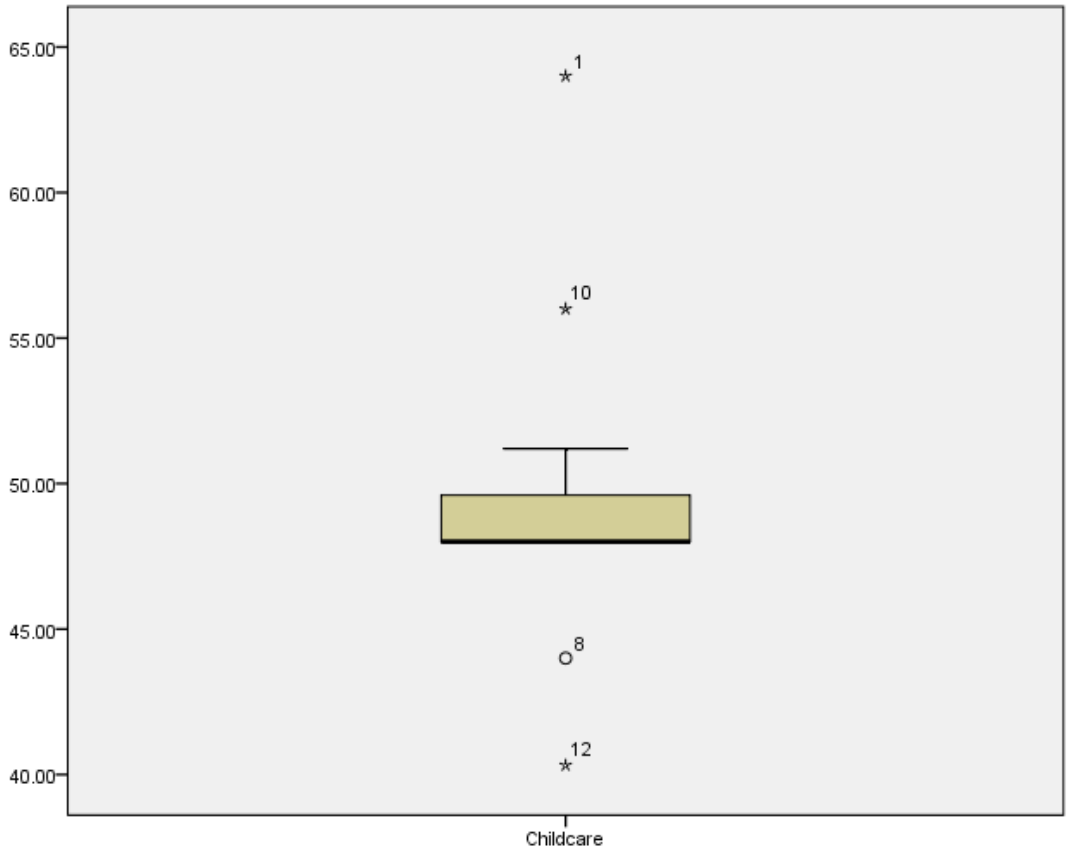
Regional variation

For childcare costs, much of the variation is driven by the lower and the upper end of the ranking. Unlike with food and clothing, not all regions remain within the range of a standard boxplot. London and Wales (denoted '1' and '10' in the graph below) are above, while the North West and Northern Ireland ('8' and '12') are below. The remaining regions are clustered much more closely together. This is mirrored by the 95% confidence interval which has been calculated for the national mean cost. All regions except for the four outside of the boxplot remain within that interval. Thus, childcare costs show a very different pattern of cross-regional variation than food and clothing costs.

The fact that London is so far apart from the other data points is not surprising at all; as will later be shown, London is an outlier in more than one respect. Yet it is not clear what explains the deviation of Wales, Northern Ireland and the North West. It does, however, not seem to be an idiosyncrasy of the data. The number of price quotes per region is about the same as for most other products, so there is no reason to suspect that the figures have been drawn from an inadequately small and potentially unrepresentative sample. More importantly, a similar pattern can be observed for preceding years, whereas random

measurement errors should be one-off phenomena. It is also notable that the findings are not incompatible with those of the Daycare Trust (2012), which collects its own childcare cost data independent of the ONS. In short, while it is not clear where this regional pattern comes from, there are no obvious 'warning signs' that would caution against using the data.

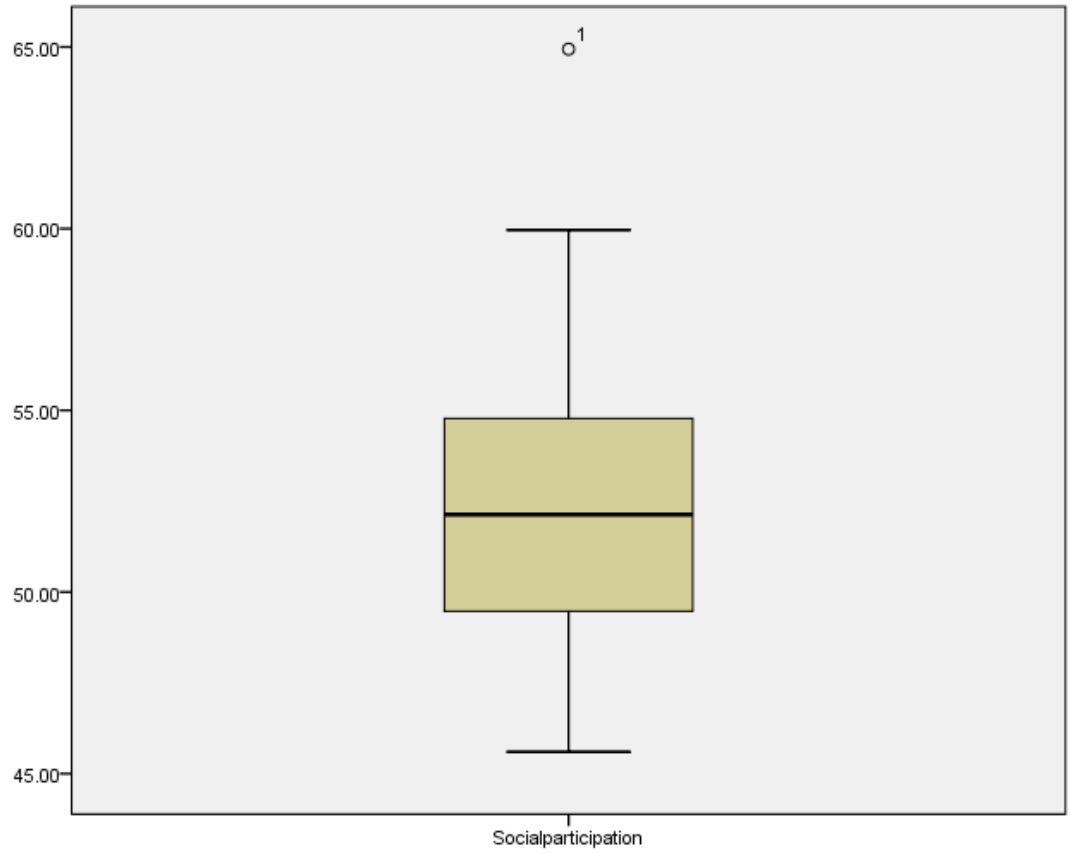
Figure 7.13: Boxplot for the regional variation of the childcare costs, 2009



A 95% confidence interval has also been calculated for the national mean cost of the social participation/leisure activities basket. Three regions are below the interval's lower bound, and two regions are above its upper bound.

The graph below shows a standard boxplot for this subcategory. Only London (denoted '1' in the graph) is above that range.

Figure 7.14: Boxplot for the regional variation of social participation costs, 2009



The variation in the cost of social participation in particular raises the question whether it is a genuine variation in the cost of these services, or whether it is simply variation in the cost of commercial rents, passed on to consumers. Rent levels will be dealt with in a separate subchapter, but it can already be foreclosed that the latter seems to be the case. The cost of leisure activities cannot be analysed in its own right, because it appears to be mostly a function of the cost of business premises. If so, it would be blind alley to analyse regional differences in the industry structure of the leisure industry. The proper focus would then be the property markets.

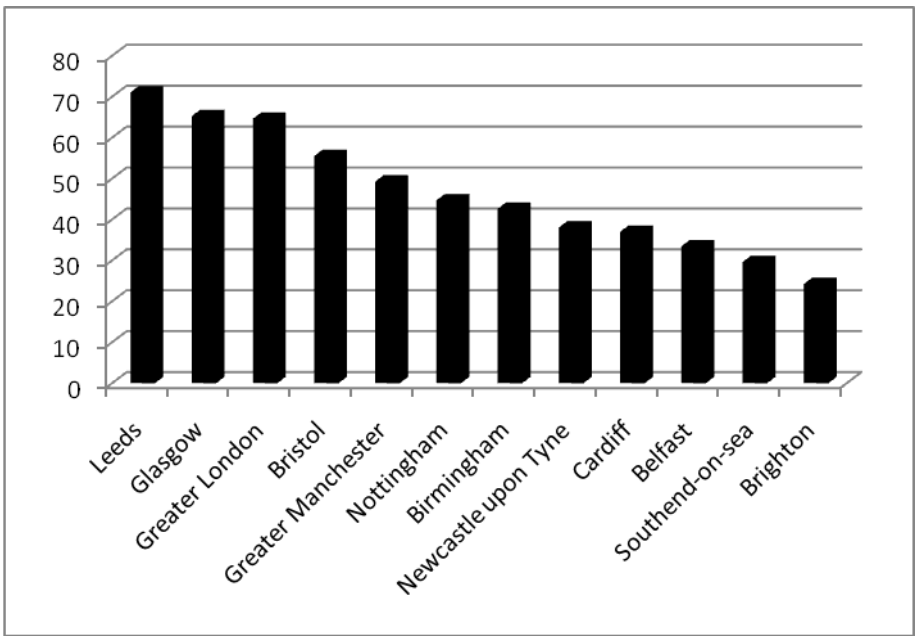
7.6 The poverty line for transport

The PSE specifies transport for a number of selected and irregular occasions, which cannot meaningfully be priced in this format. So instead, for transport, the CBS basket will use the cost of season tickets as a proxy.

Season ticket prices have been gathered from local transport providers for the largest city in each region. These will not be representative for the region as a whole. In smaller towns and rural areas, local transport will tend to be cheaper, but also patchier, and this is the kind of trade-off which the CBS has difficulties incorporating. There are surely more sophisticated ways of accounting for transport costs, but for now, preference is given to simplicity over accuracy in this category.

In each of the twelve cities, the price of a season ticket which covers the whole area of the town itself, and the closer surroundings, has been selected. The budget is therefore also suitable for commuters from the city fringe or suburbs who do not have a car. The ticket has to cover all large bus companies operating in the town, and where available, also underground and local train services. Here, an exception has been made for Greater London, where an all-purpose ticket covering all zones and all means of transport would be prohibitively expensive. Instead, a ticket which covers underground and railway in the inner zones, and bus services in all zones, has been chosen. Elsewhere, where the price of season tickets differs by zones, all zones have been included, except when the outer zones are far beyond the city's boundaries. Discounts for children have been taken into account. The figure below shows the resulting budgets for a family of four in 2009, expressed on a weekly basis.

Figure 7.15: The transport budget for a family of four, 2009, £ per week

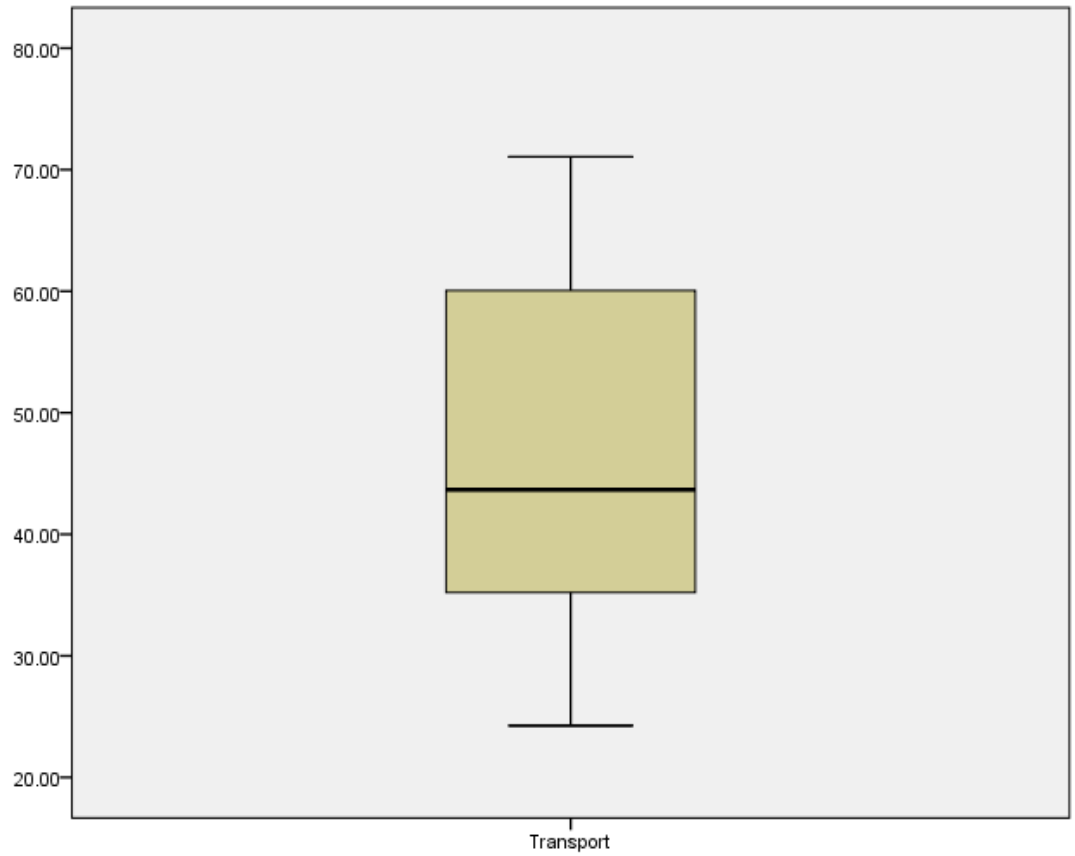


Regional variation is difficult to interpret in this case, because the budgets do not represent exactly the same product in each region. It cannot be established to what extent differences in ticket prices reflect differences in the quality and availability of transport services, rather than regional variation in the price of a given standard of service.

With this qualification in mind: A 95% confidence interval has been calculated for the national mean of transport costs. Three regions are above the upper bound, and three regions are below the lower bound, of that interval.

Even though the way in which the ticket prices have been selected could be prone to producing outliers, all regions fall within the range of a standard boxplot.

Figure 7.16: Boxplot for the regional variation of transport costs, 2009

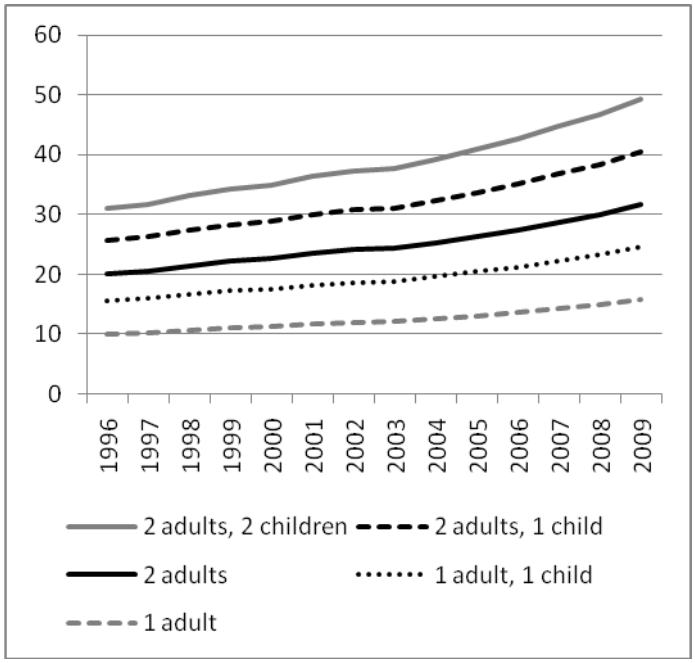


Prices have been dated back until 1996 using the relevant subcomponent of the CPI. This means that regional variation in time trends will not be captured. Between 1996 and 2009, the public transport sub-index of the CPI has increased by about 60%, but this development has surely not been uniform across all regions. Backdating all transport costs by the same deflator also means that changes in the implicit equivalence scales will not be detected.

This is not ideal, but since time series for specific ticket prices are not available, a second-best solution has to suffice.

The figure below shows transport budgets for different household types using the example of Greater Manchester. The implicit equivalence scale can be seen in e.g. the difference between the budget of a two-adult household, and that of a single parent with one child, with the latter being below the former. The budget for a two-adult household, in contrast, is simply twice the budget of a single adult.

Figure 7.17: The transport poverty line in the North West (Manchester), £ per week



7.7 The poverty line for housing

Rents are included in the ONS data, but it is not differentiated by flat size, which makes it inappropriate for the purposes of this chapter. Therefore, rental rates have been gleaned from Local Housing Allowance Direct (LHA Direct, 2012). It shows the Housing Benefit (HB) rates for different household types in every local authority, and the HB rate is, by virtue of its formula, always equal to the local median rent. As in the case of transport, it is not possible here to derive a separate poverty line for every town and village in the country, which is why the largest city of each region has been selected. The resulting poverty lines will therefore have a heavy bias towards larger towns and cities. It will be a collection of

'metropolitan poverty lines', with housing and transport components that cannot easily be extrapolated to the country as a whole. However, this problem could be solved in future versions of the CBS by grouping towns and villages into price bands.

Until recently, HB rates have been set equal to local median rents, which has now been changed to rents at the 30th percentile of the local rent distribution. The HB rate is therefore sufficient to afford three out of ten flats in each locality without a co-payment. In theory, it would be sensible to do the same for the CBS basket. Nevertheless, the rent levels chosen here for the CBS basket follow the old rather than the new HB formula: They are based on median rents rather than rents at the 30th percentile. The reason for this is as follows: The HB price distribution is built on price quotes from local landlords, which are differentiated by flat size, but not by whether the flat is furnished, and what bills are included. Thus, it cannot be verified whether a flat at the 30th percentile of the distribution is really cheaper than a flat at the 50th. It might just be less furnished, and/or cover fewer ancillary rental costs, in which case additional allowances would have to be made elsewhere in the CBS basket.

A housing budget equal to the median rent should be sufficient to cover the rent of a flat which is at least partly furnished, and where the rent already includes a few bills. As mentioned, the ONS price data on rents does not differentiate flats by the number of bedrooms, so the figures from this source cannot be used here. Nevertheless, some useful information can be derived from the ONS rent data. Firstly, unlike the LHA data, the ONS data differentiates between furnished and unfurnished properties. It shows that most flats are at least partly furnished, but these are unlikely to be found among the lowest percentiles of the rent distribution. At the distribution's mid-point, however, there is a high chance of finding flats that are fully or partly furnished.

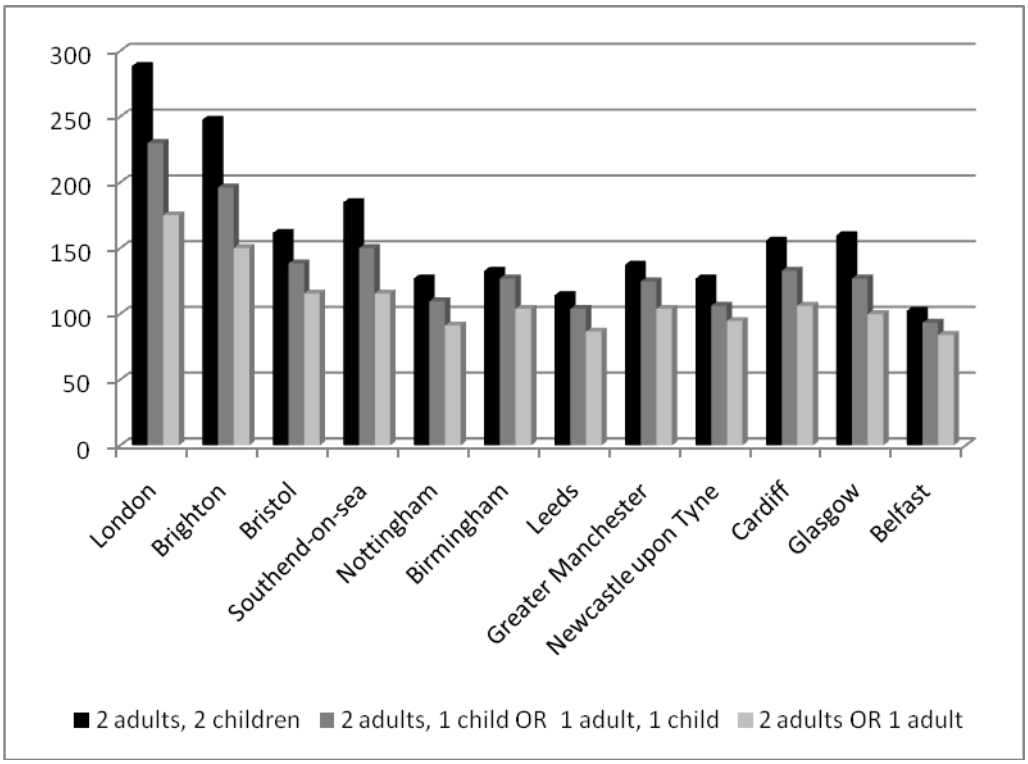
For this reason, median rents have been selected, and the flat has been assumed to be partly furnished. No separate allowance has been made for tables, chairs, beds, refrigerators, fridge-freezers and washing machines. It has been assumed that the flat is partially furnished, but not decorated, so items like rugs have been included in the household goods category (see subchapter 7.5). Water rates and the cost of services like refuse collection have also been assumed to be included in the rent. The cost of fuel and electricity, meanwhile, has been assumed not to be included. A separate allowance for this purpose will be added later.

The Housing Benefit formula assigns

- a one-bedroom flat to single adults, and to childless couples
- a two-bedroom flat to single parents with one child, and to couples with one child
- a three-bedroom flat to a couple with a son and a daughter (children of the same sex are expected to share a bedroom).

This assignment has been adopted for the CBS. For the family of four, the children have been assumed to require a separate bedroom each. The results for 2009 are shown below, in weekly amounts. To be precise, these figures are the standard HB rates in the respective towns as recorded in January 2010, so they capture all rent increases that have taken place over the course of the year. A few towns have more than one HB rate per flat type. Manchester, for example, has one set of rates for Southern and one for Central Greater Manchester. In such cases, preference has been given to the cheaper one, because the transport budget is already designed to enable commuting. Nevertheless, the HB rates have been taken for the area of the town or city itself, not for suburbs or neighbouring villages. A borderline case is Leeds, where the fringes of the city overlap with Bradford and South Dales, which have a lower HB rate. The latter has been chosen, because it is still part of the same conurbation, and within reach of the transport budget. The least clear-cut case is Greater London, which is subdivided into twelve different HB rates. Here, the rate for an area which falls mostly into zone 3 of the underground map has been chosen, because the season ticket chosen for the transport component still covers all means of transport in this zone. The results are shown in Figure 7.14, and since housing is such an important component, it is shown for all household types.

Figure 7.18: The housing budget (=the standard rate of Housing Benefit), £ per week

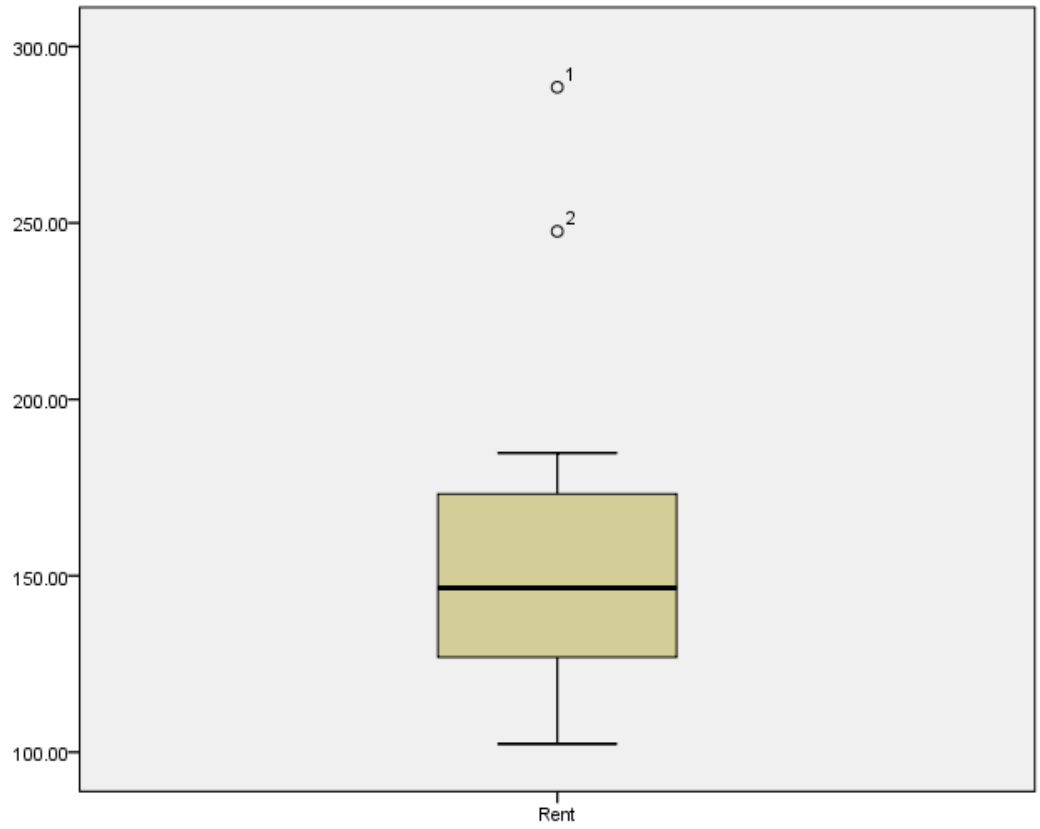


A 95% confidence interval for the national mean rent has been calculated. Two regions are above the upper bound, and another two are below the lower bound, of that interval.

London and Brighton with their very high rent levels account for a disproportionate share of the variation. As the figure below shows, these two cities fall outside of the range of a standard boxplot. If they were excluded, the spread between the costliest (which would then be Southend-on-Sea) and the least costly city would drop from 95% to 57%. While this is a much narrower range, it still amounts to almost £4,300 per annum for a family of four.

The fact that London and Brighton are far apart from the rest of the sample is not implausible. It is well known that the UK's housing cost pressures are strongest in the Southeast and London, and the pattern is also mirrored by Demographia's (2012) data on house price variation across UK regions.

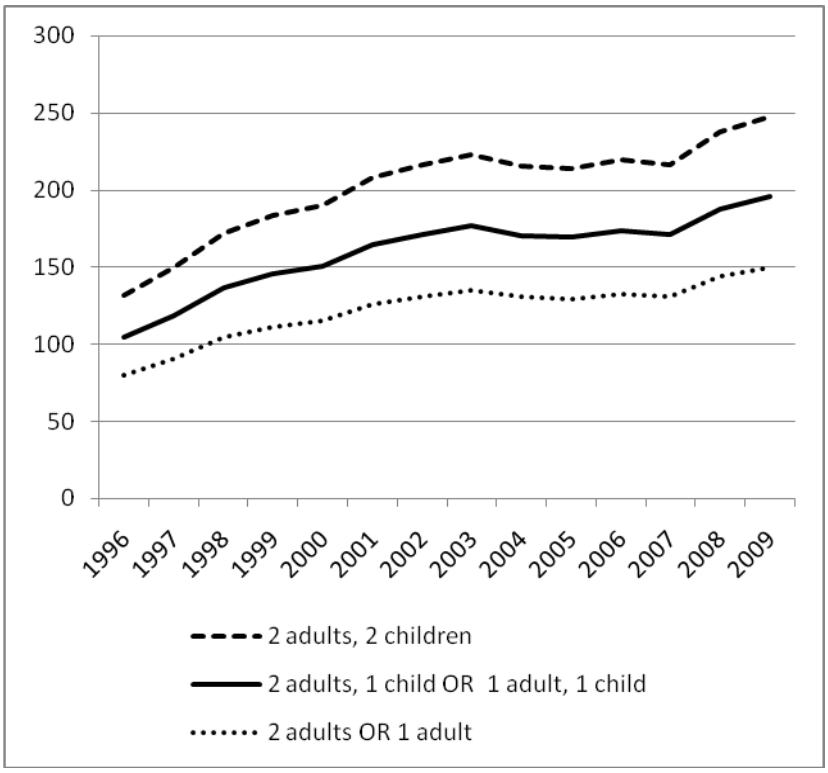
Figure 7.19: Boxplot for the regional variation in housing poverty lines, 2009



Unfortunately, HB rates are not available for prior years, so the ONS rent figures have been used as an auxiliary device. As mentioned, the rent rates from this source cannot be used because they are not differentiated by flat size. However, there is no reason why this should affect the trend. Therefore, the time trend in rent levels has been calculated separately for each region, and then used to track back the rent levels shown in Figure 7.14 until 1996. This is a second-best solution, HB rates for the whole period would have been preferable. But for a prototype measure, it is a close enough approximation.

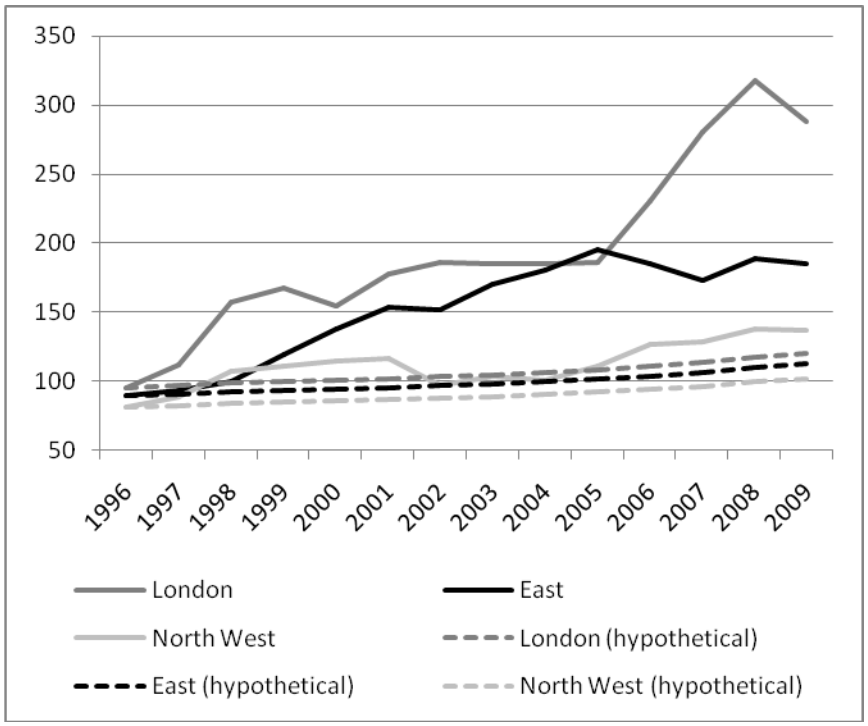
The figure below shows the evolution of rents in the Southeast, represented here by Brighton. The Southeast, as in the cases above, is a representative region as far as price trends are concerned, as it rarely changes its position in regional price rankings. It shows that rent levels have about doubled in the period considered here, following a fairly steady year-on-year increase.

Figure 7.20: The housing poverty line (rent levels) in the Southeast (Brighton), £ per week, 1996-2009



This trend of high rent increases has not been limited to the Southeast. The figure below shows the evolution of rent levels in the three most populous regions apart from the Southeast, which are London, the North West and the East. The solid lines show how rent levels have actually evolved, and the dotted lines show how they would have evolved if they had only risen in line with inflation. It shows that the hypothetical evolution has nothing in common with the actual evolution.

Figure 7.21: The housing poverty line in London, the North West, the East and Northern Ireland, £ per week, 1996-2009



The poverty line is now nearly finished. It has been assumed that fuel costs are not included in the rent, which is why the fuel allowance from the Joseph Rowntree Foundation's Minimum Income Standard has been adopted for each household type. The last chapter has explained that the MIS is, on the whole, a highly problematic measure of poverty, which is why it will not be used for any other purposes here. However, determining a fuel budget should be a relatively practical matter, for which the MIS should be as good as any other specification. The figure has been taken for the year 2008, and then updated and deflated by the fuel subcomponent of the CPI.

After all items have been added up, a discretionary allowance of 5% of the total has been added for miscellaneous items and spending inefficiency. With this, the CBS poverty line is finished.

Price variation

Before its results will be presented in the next chapter, it is necessary to provide an additional note on price variation. The previous subchapters have shown that while there is a considerable extent of cross-regional variation in price levels, this usually reflects a general spread – it is not explained by one or two atypical regions. There are exceptions to

this, i.e. there are a few cases where one or two regions are very far apart from the rest. But in those cases (e.g. rent levels in London), the outcomes are plausible, and can be corroborated by consulting alternative price data sources.

As far as price variation *within* categories is concerned, there is, by design, a clear divide between the categories. The food and the clothing baskets are highly diversified baskets; they contain large numbers of items, and no single item has, on its own, a discernible impact on the total cost of the respective sub-basket. For the housing, childcare, social participation and transport baskets, the opposite is true: these sub-baskets only contain up to three individual items, so each individual price has a strong influence on the total cost of its respective sub-basket (indeed, it often *is* the cost of that sub-basket).

As a result, these sub-baskets are a lot more sensitive to which precise product is chosen and how the price is selected. Fortunately, these are also often the categories for which alternative price data sources are available, which decreases the reliance on any one price recording mechanism. But these are also the categories for which the PSE is at its vaguest, and while the aid of the LCFS can mitigate this problem, it remains a roundabout selection mechanism. This problem can ultimately only be overcome by redesigning the PSE, which, after all, was not designed for the purpose of being distilled into a consumption basket. The final chapter will elaborate on this in detail. For now, suffice it to say that the CBS poverty line constructed here must be seen as a prototype, not as the final word.

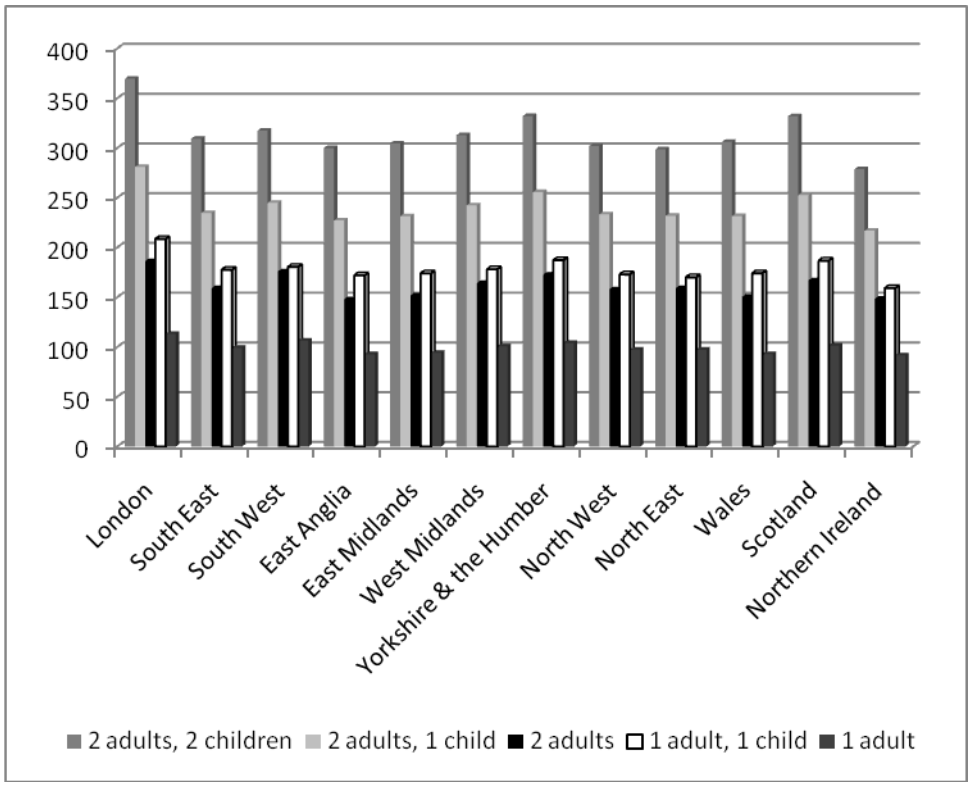
8. The CBS poverty line

8.1 The CBS poverty line net of housing costs

The CBS poverty line is the sum of the different sub-poverty lines discussed in the previous chapter. One result that becomes immediately apparent is that housing costs occupy a special place in the CBS basket, representing by far the single biggest cost item. It is therefore sensible to discuss the poverty line including and excluding housing costs separately, because otherwise, there is a danger that housing costs overshadow everything else. (Upper and lower bounds are dropped in this part of the discussion.)

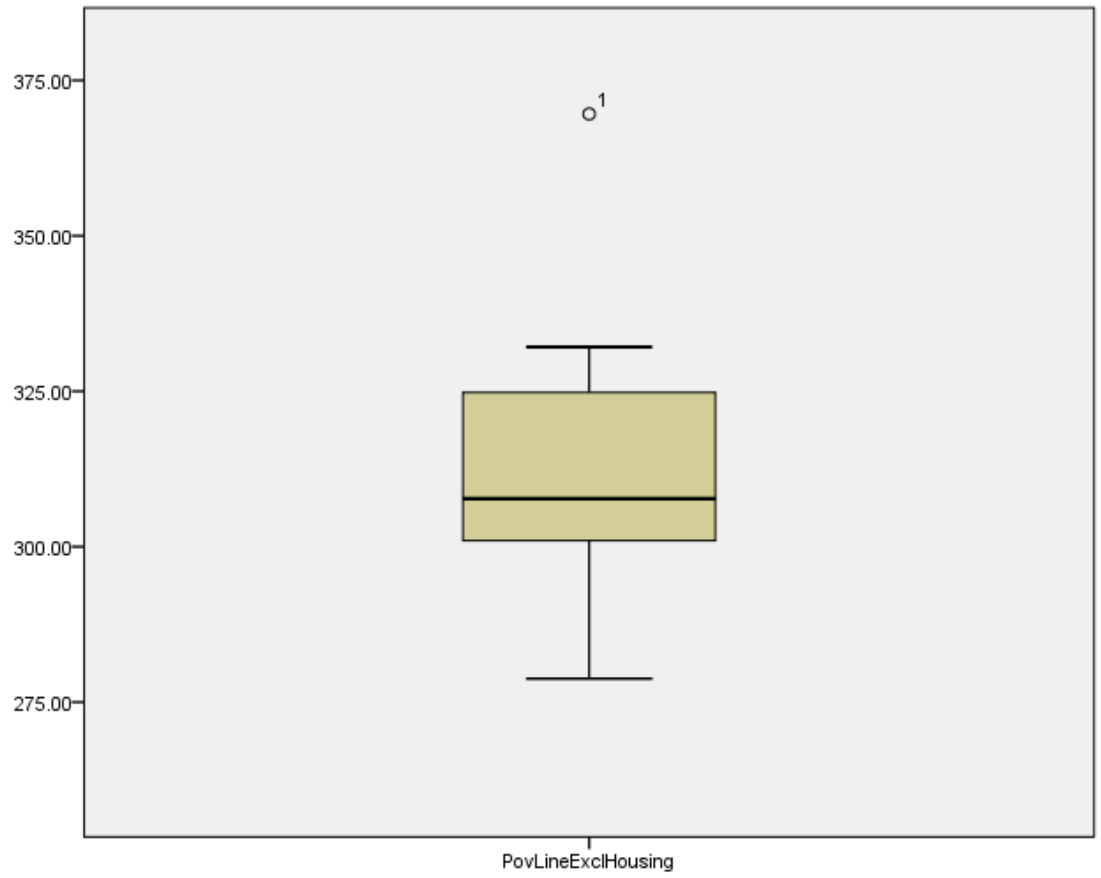
For this purpose, rents have been subtracted from the total poverty line. The total poverty line includes a discretionary element of 5% of the total for miscellaneous items and spending inefficiency. This element has been left untouched in this subchapter, so housing costs have not been entirely removed, as the discretionary part also contains 5% of housing costs. The figure below shows the non-housing CBS poverty line for 2009, differentiated by household type and region, expressed in £ per week.

Figure 8.1: The CBS poverty line excluding rent in 2009, £ per week



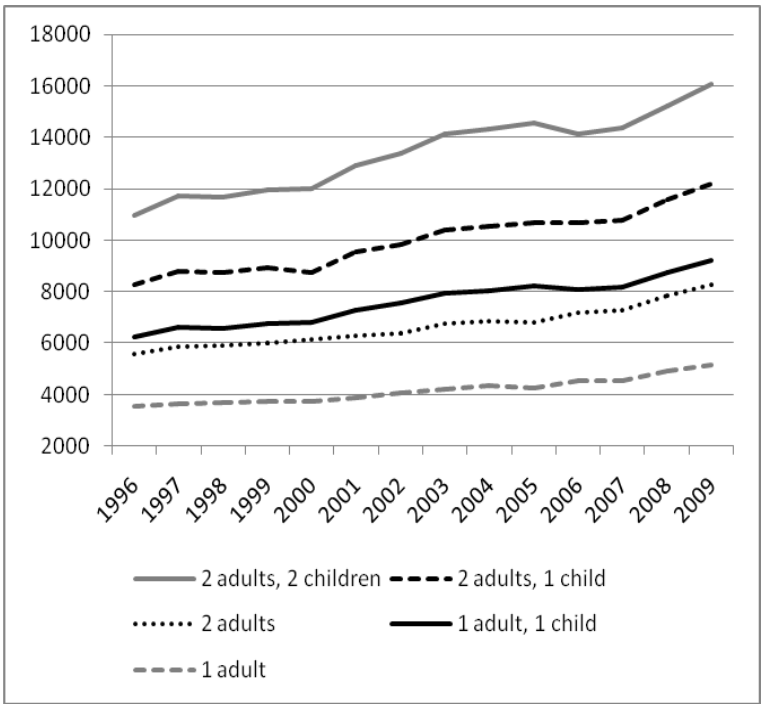
On this basis, a family of four in London would have required a non-housing budget of £370 per week to afford all consensually established necessities, and to fully participate in society. In Northern Ireland, a budget of £279 would have afforded the same standard, so there was a spread of 28% between the most expensive region and the least expensive one. This drops to 10% if London is excluded. London, as the graph below shows, falls outside of the range of a standard box plot.

Figure 8.2: Boxplot for the regional variation of CBS poverty lines excluding rent, 2009



A family of four needed about 3.2 times the budget of a single adult, 1.9 times the budget of a childless couple, and 30% more than a couple with one child. These implicit equivalence scales show some variation across regions, however, due to differences in cost structures. They have also changed over time. The figure below shows the evolution of the non-housing poverty line in the Southeast since 1996. The Southeast best illustrates this time trend because it is the most typical region in this regard: When ranking regions by the rate of change, the Southeast occupies a middle position. This time, the figures are expressed on an annual basis.

Figure 8.3: The annual non-housing CBS poverty line in the Southeast, 1996-2009, in £



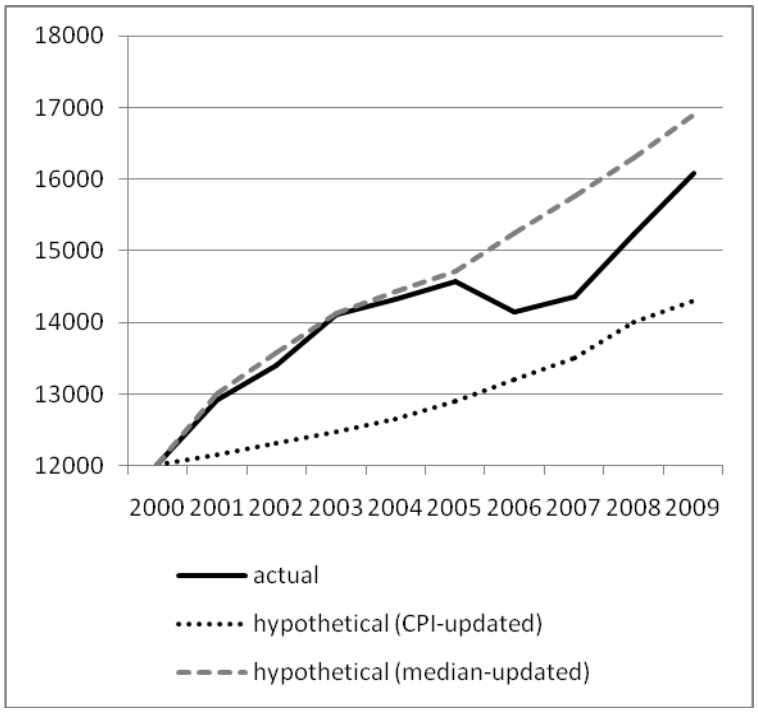
The cost increase has been substantial for all household types. Over the period from 1996 to 2009 as a whole, the non-housing poverty line has risen almost twice as fast as the overall price level. Thus, even though it has been a period of moderate overall inflation, the experience of low-earners has been more akin to a high-inflation period.

The fastest increases occurred since 2000. If the CBS non-housing poverty line had risen only in line with the rate of CPI inflation since 2001, then for a family of four in the Southeast, the 2009 level would have been almost £1,800 below the level actually observed. This is shown in Figure 8.3, which shows the same non-housing CBS poverty line for a family of four in the Southeast as in Figure 8.2, and plots it against a hypothetical line that rises in line with inflation from 2001 onwards.

The figure also includes a second simulation, in which the non-housing poverty line rises at the same rate as median incomes AHC. In other words, this simulation lets the CBS non-housing poverty line rise in line with the relative poverty line AHC from 2001 onwards. This simulation is closer to the actual outcome than the first simulation. This is remarkable insofar as the CBS poverty line is not, in itself, relative. In the short run, the basket is more or less constant. The resulting poverty line should therefore behave more like an absolute than like a conventional relative poverty line, unless low-earners effectively face a higher

rate of inflation than average earners. Figure 8.3 shows that this is precisely what has happened.

Figure 8.4: The evolution of the non-housing poverty line for a family of four in the Southeast, actual vs. hypothetical, in £ per year



Finally, it is now possible to compare the non-housing poverty line to median incomes after housing costs (AHC). Relative poverty AHC, which measures AHC incomes against a threshold of 60% of the AHC median, is a standard variation of relative poverty. Figure 8.4 shows the results for a family of two adults with one child in two separate years, 2007 and 2009. 2009 is the most recent year, but being a recession year, it may not be the most representative one. Figures for 2007 are therefore also included. In both cases, the denominator is the national AHC median income in the respective year, expressed in prices of the respective year. It shows that in all regions except London, the non-housing CBS poverty lines for this household type are clustered in a range between 35% and 45% of the national AHC median. Three regions are below the lower bound, and three above the upper bound, of a 95% confidence interval around the mean. Yet even the highest value, which is recorded for London, remains just below 50%, and thus well below the conventional relative poverty threshold of 60%. Figures for a single adult household are in a similar range, albeit with some differences in the regional ranking.

Figure 8.5: The AHC poverty line in % of the AHC median, 2 adults & 1 child

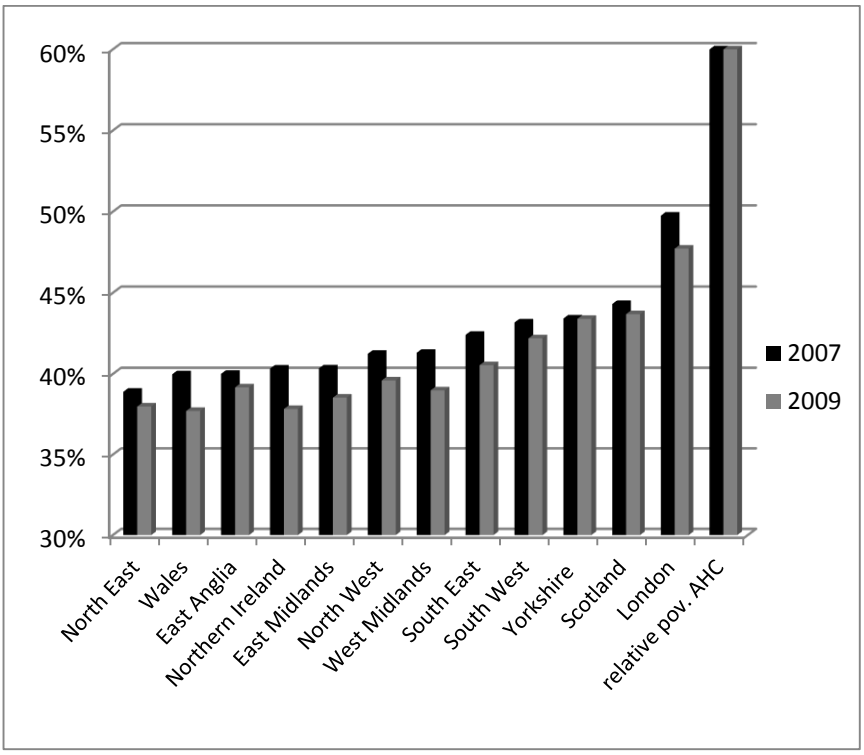
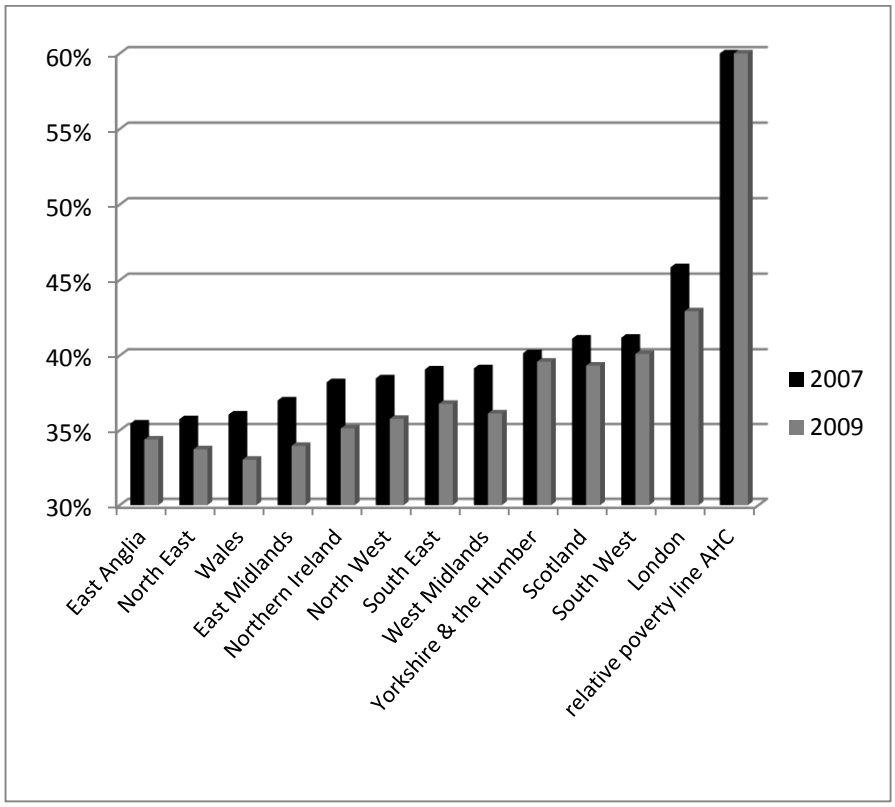


Figure 8.5 shows the same for a childless couple. For this household type, non-housing poverty lines are clustered in a range between 30% and 40% of the AHC median. Figures for a family of four, as well as a single parent with one child, are mostly between 40% and 50% of the same threshold.

Figure 8.6: The AHC poverty line in % of the AHC median, 2 adults without children



The most striking observation is that on an AHC basis, the relative poverty line consistently exaggerates the cost of social participation. It is possible to purchase a consumption basket which covers all non-housing necessities as defined by the majority of the population, and interpreted in a generous way, at a non-housing budget well below 60% of the AHC median. This is true for every household type and in every region. Only the London non-housing poverty line comes within reach of the relative poverty line AHC, and then only for some household types. For most household types in most parts of the country, a non-housing budget of about 40% of the national median or less is sufficient to cover the cost of food, clothing, transport, regular leisure activities, fuel, household goods, personal services, and some miscellaneous items.

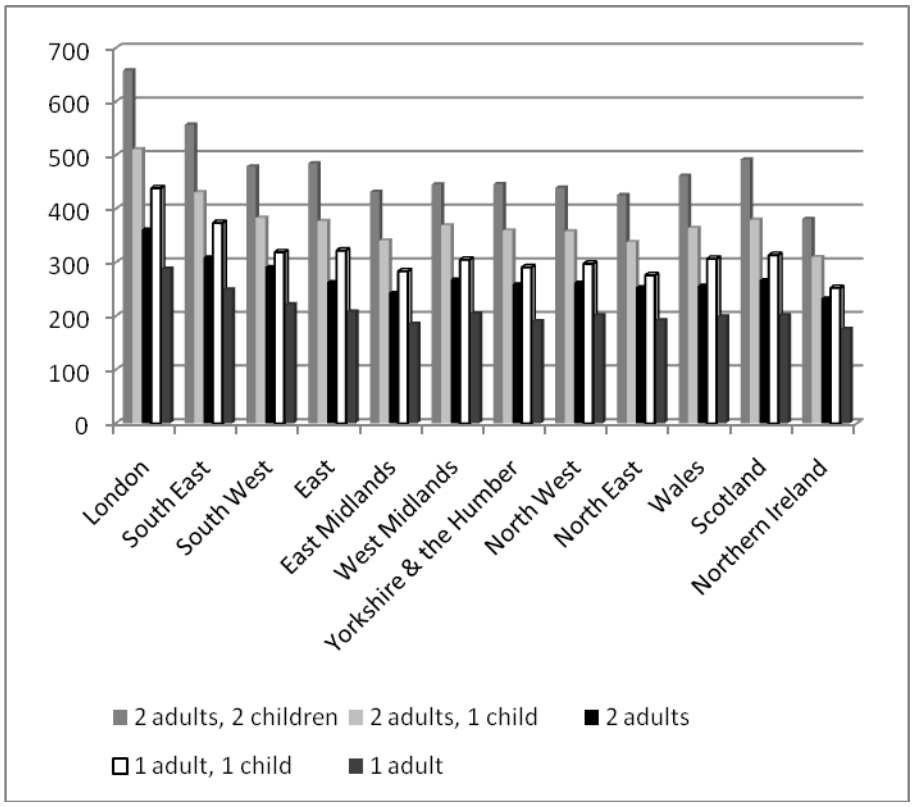
This result is remarkable for at least two reasons. Firstly, AHC measures do not really filter out the cost of housing. Via commercial rents, the cost of business premises enters the cost of all goods and services which require more than a minimum amount of space. The term 'after housing costs' is arguably a misnomer; a more accurate term would be 'after *direct* housing costs'. Secondly, on top of the increases that can be explained as a pass-through of rising housing costs, there have been substantial increases in the cost of food and especially fuel (documented in subchapter 5.7). The combined result has been shown in Figure 8.3,

with the non-housing CBS poverty line rising at a rate not much below the growth rate of the AHC median income. Yet nevertheless, even after a decade of a fast-growing non-housing poverty line, the latter remains far below the relative poverty line AHC. This suggests that product markets in the UK have been sufficiently competitive to cushion some of the adverse developments in other areas, an asset of the UK economy which is underappreciated in poverty research.

8.2 The complete CBS poverty line

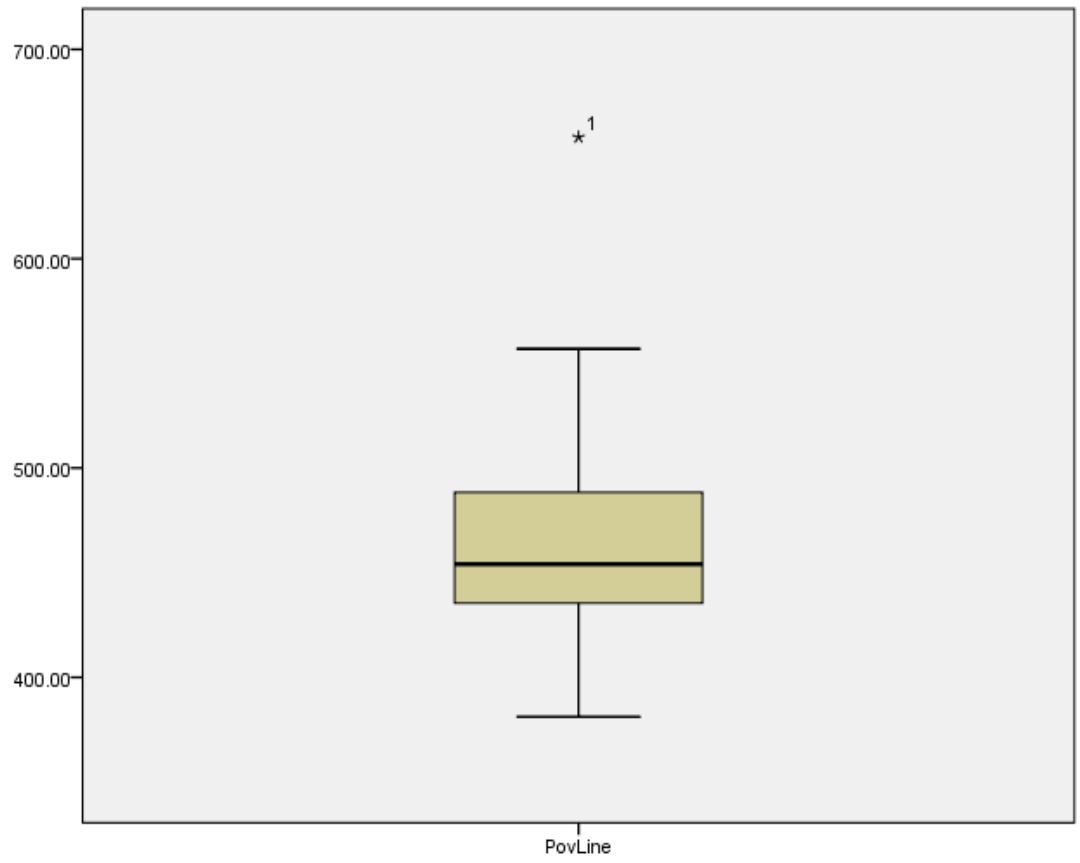
The figure below shows the complete CBS poverty line for 2009, differentiating by region and household type. The data is exactly the same as in Figure 8.1, except that rent, as derived in subchapter 7.7, has been added. The poverty line for a family of four is now between £400 and £500 per week in all regions except the Southeast and London at the high-cost end, and Northern Ireland at the low-cost end. The cost of the full CBS basket climbs to £560 for the Southeast, and £660 for London.

Figure 8.7: The CBS poverty line in 2009, in £ per week



The poverty lines of eight regions are within a 95% confidence interval around the national mean, with two regions above the upper and two regions below the lower bound. London falls outside of the range of a boxplot, while the other regions are contained within it.

Figure 8.8: Boxplot for the regional variation of CBS poverty lines, 2009



The table below shows the implicit equivalence scale that can be calculated from this, even though a note of caution is required: This equivalence scale varies a lot across the country, as the underlying cost structure varies a lot, leading to substantial differences in the extent of economies of scale in household consumption. Since the cost structure varies over time, so does the implicit equivalence scale. Nevertheless, the scale is interesting because it differs a lot from conventional scales, two of which are included for comparison. Since housing costs occupy such a large proportion of the poverty line, and since a childless couple has been assumed to share a bedroom, a single adult needs as much as 77% of the budget of a childless couple to attain the same standard. The economies of scale that result from two adults moving together are therefore much larger than conventional equivalence scales imply. Meanwhile, the economies of scale associated with adding children to the household are much smaller. This is because children have been assumed to require an additional bedroom, and also because of childcare costs being relatively high, despite the

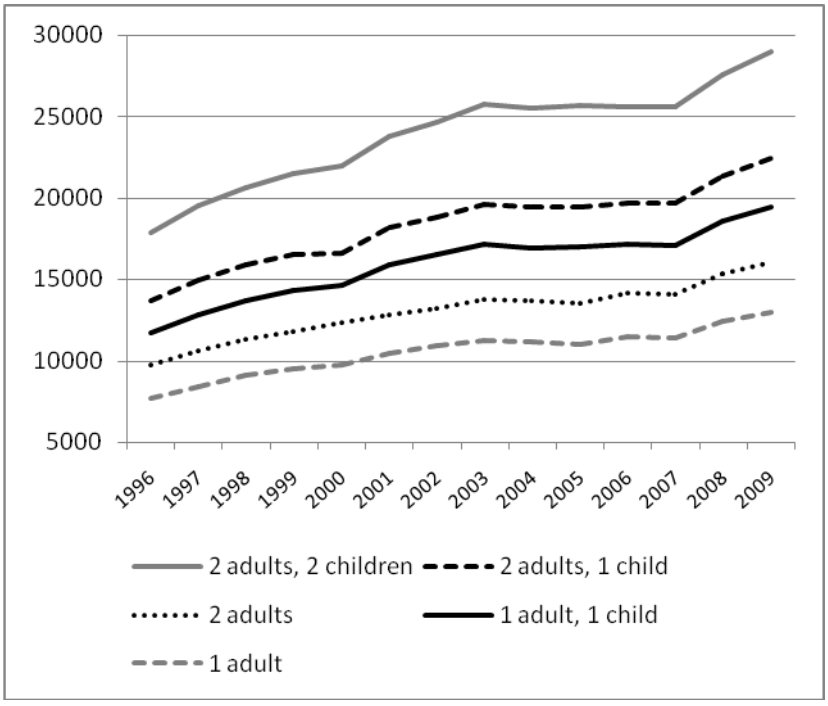
subsidy contained in the Working Tax Credit. To a lesser extent, it is also an artefact of the rather arbitrary assumption that children require the same leisure activity budget as their parents (see subchapter 7.5).

Table 8.1: The implicit equivalence scale of the CBS (2009, unweighted average of all regions)

Household member	Equivalence value		
	CBS (implicit)	McClements	OECD modified
First adult	0.77	0.61	0.67
Second adult	0.23	0.39	0.33
First child	0.39	0.18 – 0.27	0.2 – 0.33
Second child	0.36	0.18 – 0.27	0.2 – 0.33

The figure below shows the evolution of the CBS poverty line for different household types in the Southeast. Poverty lines for all household types have increased by about two thirds, which means that the implicit equivalence scale has remained relatively constant, at least in this region.

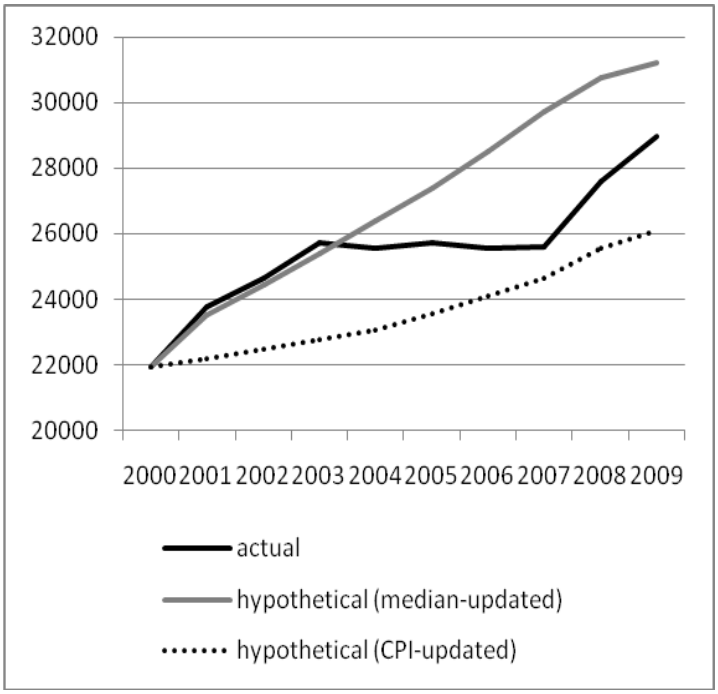
Figure 8.9: The annual CBS poverty line in the Southeast, 1996-2009, in £



The graph below puts these figures into perspective. As in the above subchapters, it shows the evolution of the actual poverty line for a family of four in the Southeast, and contrasts it

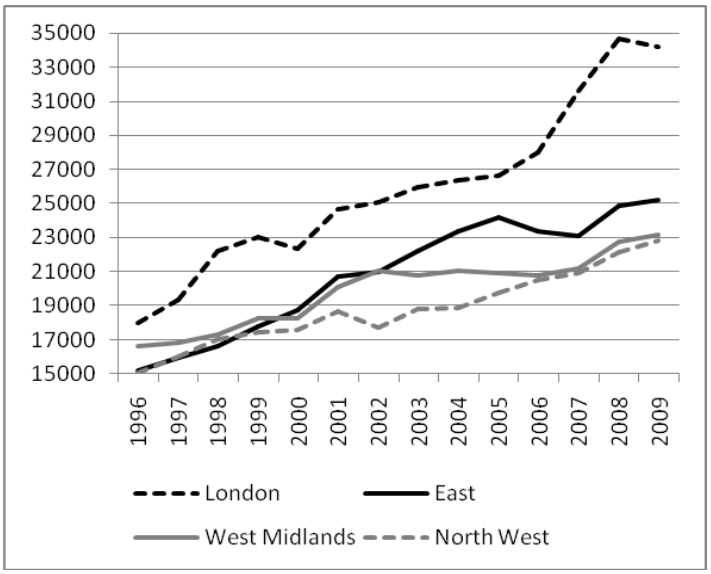
to two hypothetical scenarios. In the first scenario, the CBS poverty line grows only in line with inflation from 2001 on. In the second scenario, it grows in line with median incomes, and thus the relative poverty line. The actual outcome ends up in between these two scenarios, but closer to the latter than to the former. Neither the rate of growth in the relative poverty line nor the rate of growth in the CPI track the evolution of the CBS poverty line especially well, which is, of course, unsurprising given that they are driven by entirely different factors.

Figure 8.10: The evolution of the non-housing poverty line for a family of four in the Southeast, actual vs. hypothetical, in £ per year



The Southeast is fairly representative trend-wise, but the trend in the CBS poverty line has shown a lot of variation across regions. This is shown in the figure below, which contrasts four patterns. London has experienced the most explosive growth, with the CBS poverty line almost doubling in nominal terms. The West Midlands represent the opposite extreme with an increase of 40%, the lowest of all regions. But given that the CPI has only grown by a quarter in the meantime, this still represents a substantial increase in real terms. The North West shows a more typical pattern, and the East, while not in the same league as London, has also experienced strong cost increases.

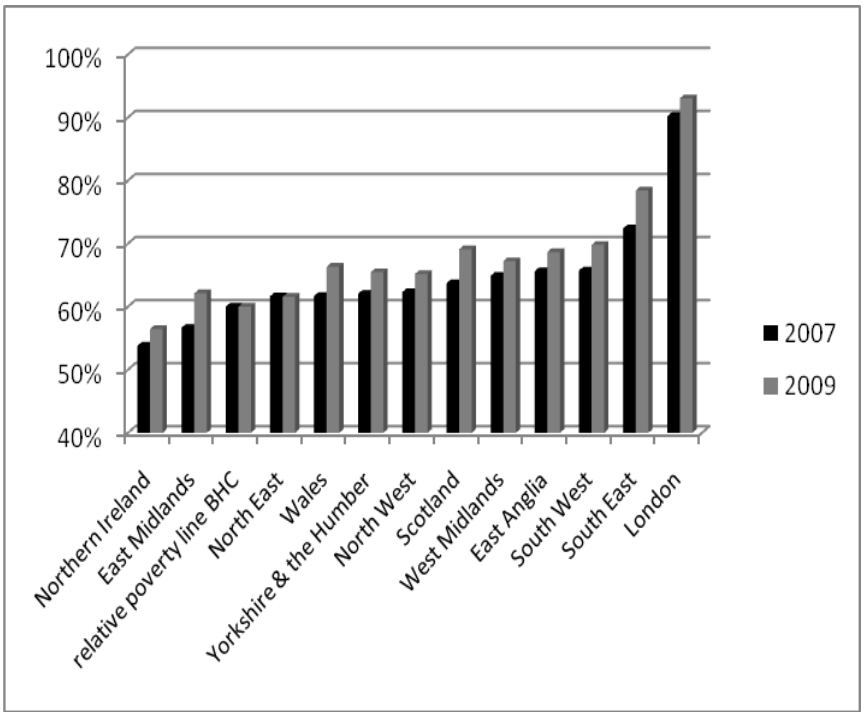
Figure 8.11: The evolution of CBR poverty lines for a family of four in four regions, in £ per year



It is now possible to express the poverty rates of various household types as a percentage of the national median, to compare them to relative thresholds. The figure below shows this for a couple with one child.

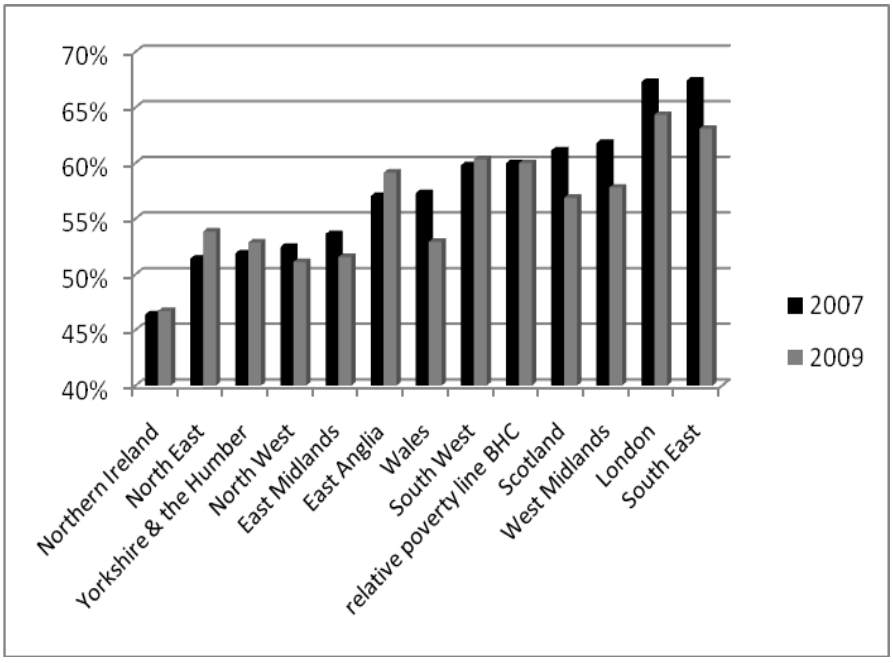
The contrast with the outcomes net of housing costs is stark. While non-housing CBS poverty lines were substantially below the relative poverty line AHC, almost all CBS poverty lines with housing costs are above the relative poverty line BHC. The CBS of most regions is between 60% and 70% of the national median. The most extreme case is London, where it rises to about 90% of the median.

Figure 8.12: The CBS poverty line in % of the median, 2 adults & 1 child



Figures for a family of four are even higher, with most regions clustering around 70% of the national median. In London, the cost of the CBS basket for a family of four is about equal to the national median income (equivalised to a family of four). Figures for a single adult and a single parent with one child are similar. It is only for the two-adult household that the CBS poverty line of most regions is lower than 60% of the national median (shown below), but even then, not by very much.

Figure 8.13: The poverty line in % of the median, 2 adults



Location and choice

CBS poverty lines differ across household types and over time, but London consistently comes out as the region with by far the highest poverty lines. This raises the question to what extent location ought to be treated as a (constrained) choice, rather than an exogenous variable. In the above subchapters, only relocations within a commutable distance have been treated as within the control of the individual, while the possibility of movements beyond those boundaries has not been considered. Thus, a household with an expenditure level just above the London poverty line, and living in central London, would not be considered poor. This is despite the fact that rent levels in central London vastly exceed the housing cost allowance in the CBS, meaning that this household's non-housing expenditure would almost certainly be below the non-housing CBS poverty line. But they would not be considered poor because their decision to live in central London would be treated as a choice, not a constraint. Should this logic be taken further? Why assume that people can move freely within London, but not out of London?

The borderline between choice and constraint is, in this case, a fairly arbitrary one. Ideally, this issue should be addressed through the PSE survey itself: Participants could be explicitly asked how much mobility can be reasonably expected from a family faced with cost pressures, and to what extent staying geographically close to one's neighbourhood could itself be considered a necessity. No such data currently exists. But the 'commutable distance' criterion used in this thesis can nevertheless be justified on other grounds:

If location was treated as a choice over which families have full control, there would be a high risk of repeating one of the major fallacies of the historical Rowntree-style BSA. The original BSA overestimated the extent to which people have autonomous control over their spending habits, ignoring the influence of factors like social conventions. As explained in Chapter 2, the BSA therefore assumed a consumption pattern that was rarely adhered to in the real world. It was far removed from the choices people actually made, and instead reflected the choices social scientists thought they should make. Treating location purely as a matter of choice would lead to a similar result. Whatever the theoretical reasons why one might expect population movements away from London, motivated by the rent price escalation, it is important to note that this simply does not happen. Between 2001 and 2013, London's population has increased by 13.5%, the largest increase recorded anywhere in the UK (ONS, 2013). As shown above, this has happened against the backdrop of an

escalation of rent levels and house prices in London, both in absolute terms and relative to other parts of the country. Movements occur between London boroughs, and immigration from outside of the UK is a large confounding factor, but there is clearly no exodus from London to other British cities. A CBS which underestimates poverty by overestimating mobility would be self-defeating. The assumption that people can move freely between London boroughs, but not outwards across the municipal border, may seem arbitrary indeed. But it is quite consistent with the population movements recorded by the census.

8.3 Correlations within the CBS poverty line

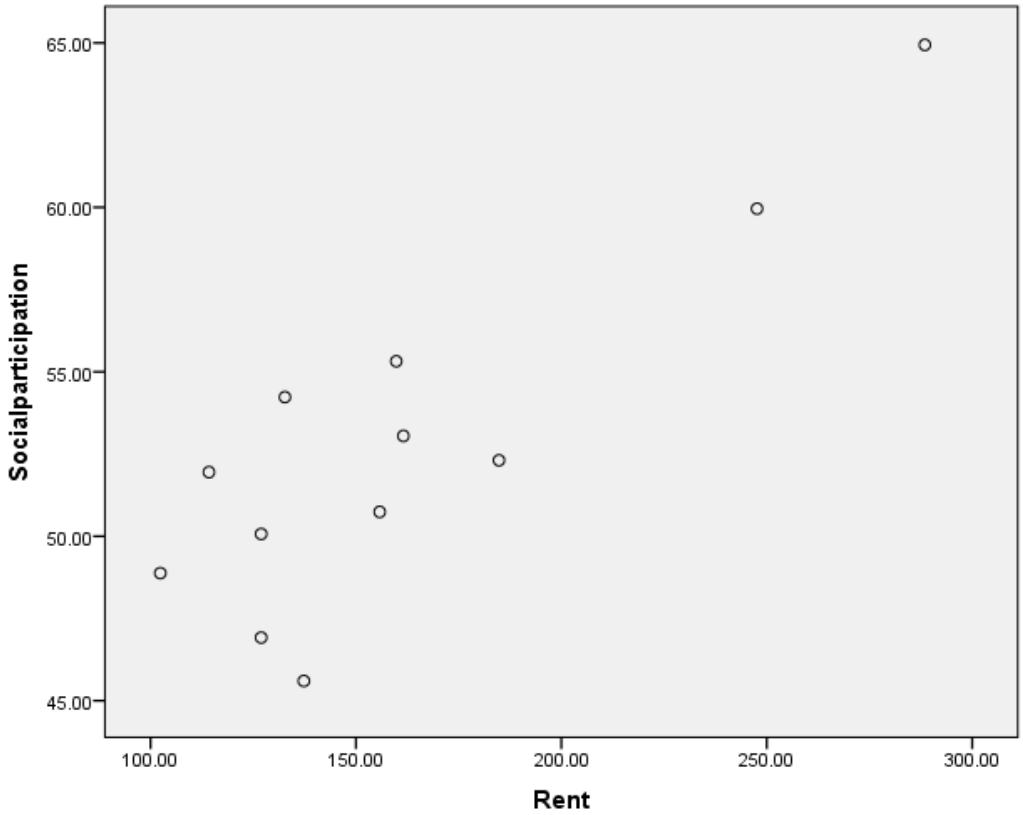
CBS poverty is mostly driven by the cost of living, or more precisely, the cost of the basic essentials. The table below shows the share of the five largest items in the poverty lines of the UK's five most populous regions. The single most important factor driving the CBS poverty line is rent levels, followed by the cost of food, with social activities, childcare and transport also occupying major shares. As documented above, there have been sustained above-inflation increases in the cost of each of these items. If relative and absolute poverty lines were replaced by a CBS poverty line, it would completely reorient the focus of poverty research. It would reorient it towards the determinants of the cost of the basic essentials, a topic which contemporary studies on the determinants of poverty rates (see Chapter 4) do not focus on at all.

Table 8.2: The composition of the poverty line for a family of four, 2009

	Southeast	London	North West	East	West Midlands
Rent	44%	44%	31%	38%	30%
Food	17%	14%	21%	19%	21%
Social Participation	11%	10%	10%	11%	12%
Childcare	9%	10%	10%	10%	11%
Transport	4%	10%	11%	6%	10%

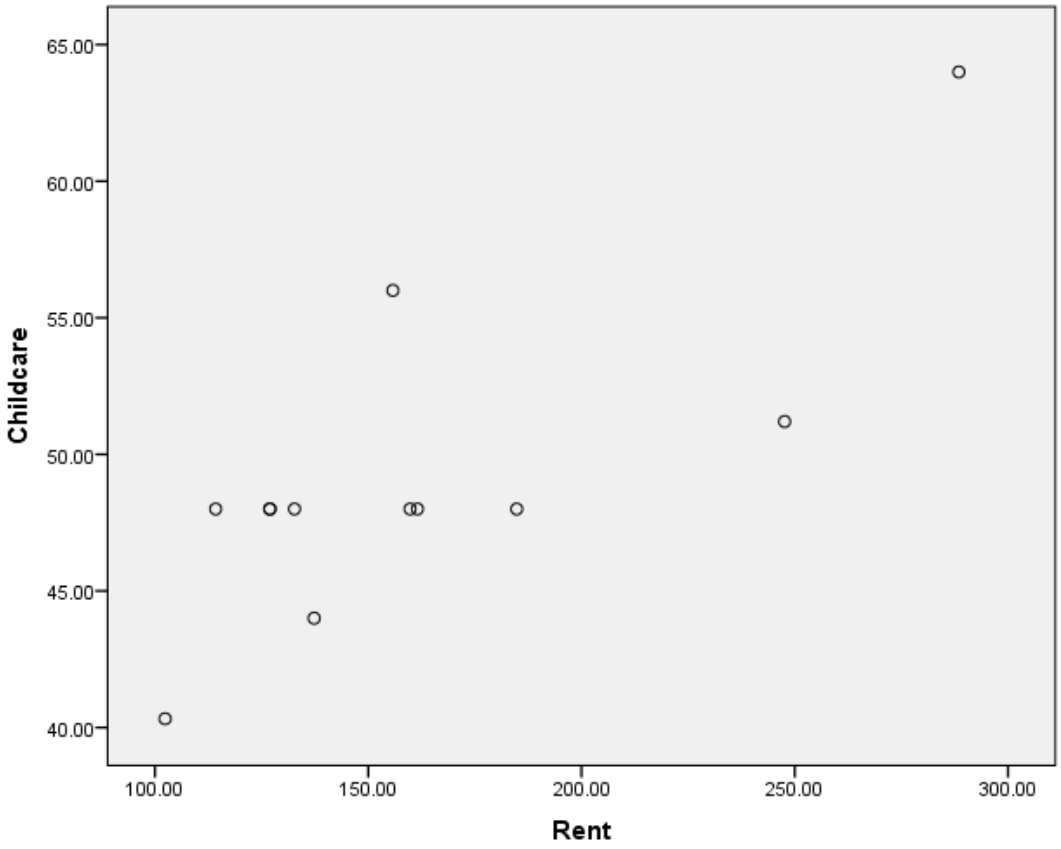
Not all of these components are independent of each other. The figure below plots the cost of the leisure service component against rent levels, in order to get a first impression of the extent to which regional differences in the former are explained by differences in the cost of space. This is not an exact comparison because the horizontal axis shows private rents, not commercial rents, which are not available in the same format. But if the former is a reasonable proxy for the latter, then the cost of leisure activities is driven by the same factors which also drive housing costs.

Figure 8.14: Rents vs. cost of leisure activities, 2009, £ per week



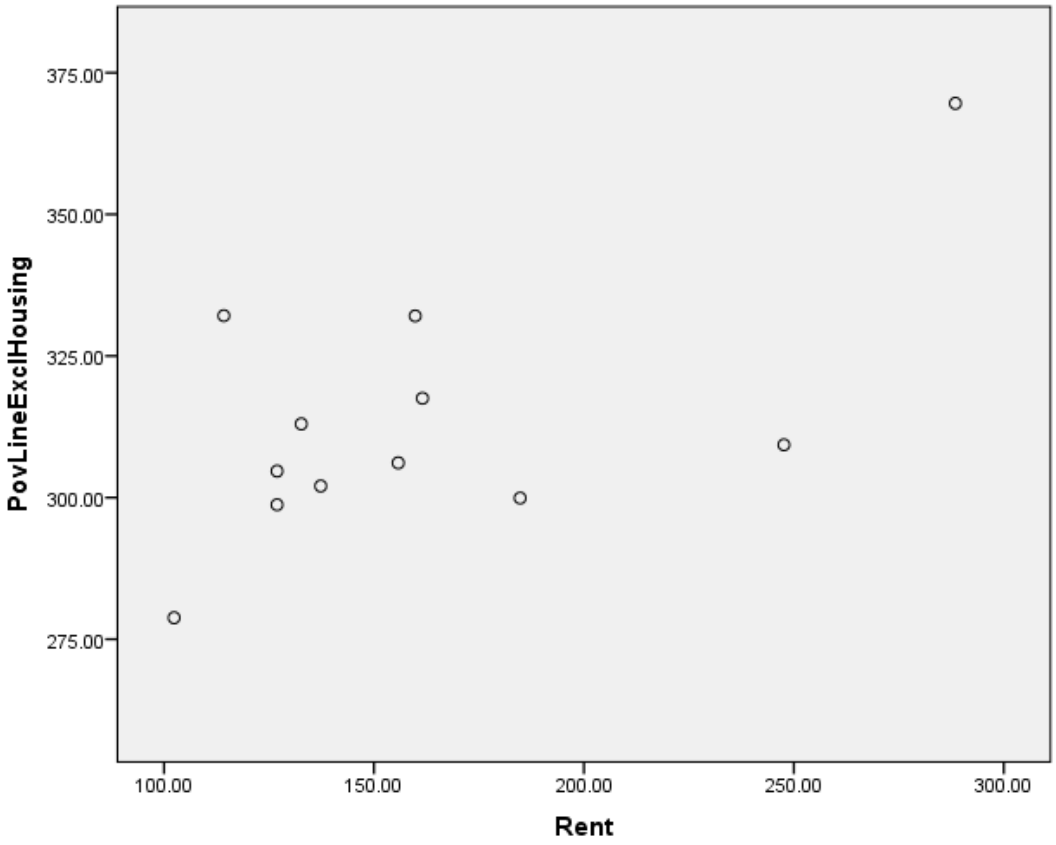
The cost of childcare is also positively correlated to rent levels, as shown in the figure below, even though this case is much less clear-cut. A number of regions have almost identical childcare costs despite substantial differences in rent levels.

Figure 8.15: Rents vs. cost of childcare, 2009, £ per week



Rent has been found to be positively correlated with most other sub-poverty lines as well, but for all the other components, the correlation has not been statistically significant at the 5%-level. Still, the non-housing CBS discussed in subchapter 8.1 as a whole is positively and significantly correlated with the one component it excludes – rents –, even though the correlation is not very strong.

Figure 8.16: Rents vs. CBS poverty line excluding rents, 2009, £ per week



The table below shows the correlations that have been shown to be statistically significant at (at least) the 5%-level.

Table 8.3 Correlation matrix of selected CBS subcomponents

	Rent	Social participation	Childcare	Non-housing CBS poverty line
Rent	1	0.87	0.78	0.63
Social participation		1	0.74	0.75
Childcare			1	0.76
Non-housing CBS poverty line				1

The short summary is that rent is not just the CBS basket's largest component in in its own right, it is also positively correlated with at least two other large components. There are good reasons to suspect causality rather than just correlation behind this: The cost of commercial space is, after all, an important component of business costs in the leisure industry and the childcare sector.

To summarise: The total cost of the non-housing essentials in the CBS basket is well below 60% of the AHC median, in all regions and for all household types. This is remarkable because many of these items have experienced cost increases well above inflation in recent years. However, once housing costs are added to the CBS poverty line, it exceeds 60% of the median in almost all regions for most household types. If the most important implication had to be distilled into one sentence, it would have to be: The problem in the UK is not that incomes at the lower end are too low, but that housing costs are too high. This is currently not reflected in either poverty research or the wider poverty debate.

8.4 Is CBS poverty greater than relative and quasi-absolute poverty?

In most regions and in for most household types, the CBS poverty line is above the relative poverty line, and it is well above the quasi-absolute poverty line. But this does not mean that CBS poverty is greater than relative or even quasi-absolute poverty. If the relative poverty line was replaced by the CBS poverty line, and everything else remained constant, then poverty rates would indeed increase. But this thesis has argued for an overhaul of poverty measurement as a whole, not just for changing one element in it. The relative poverty line should be replaced by the CBS, but the overhaul of poverty measurement should not stop here. The way in which living standards are measured for purposes of poverty measurement should also be changed. For the reasons explained in Chapter 3, income should be replaced by expenditure – not 'expenditure' in the sense of mere cash expenses, but expenditure augmented by information on debt, savings and consumption, so that it comes closer to a measure of net worth. It would include cash expenses, but it would subtract both savings and debt repayments from them, and where applicable, it would add an estimate of the imputed income stream generated by home ownership. For social housing tenants, the implicit rent subsidy of this tenure would also be added. Thus, the CBS poverty rate would not be the share of households who report to *earn* less than the CBS poverty line, but who report to *consume* less than the CBS poverty line. In the context of the results discussed above, this has important implications:

- In high-rent areas, Housing Benefit rates are also higher, and more people qualify for this payment. In London, 25.5% of all households receive Housing Benefit, and average payments are much higher than elsewhere in the country (DWP, 2012). In

theory, income statistics should already account for this, but as subchapter 3.8 has shown, Housing Benefit is one of those payments for which underreporting is particularly pronounced. A switch from income to expenditure statistics would capture a greater share of the underreported benefit income that is associated with higher housing costs in high-rent areas. This would tend to lower poverty rates in those areas.

- The measure of expenditure suggested here would add the imputed consumption stream derived from homeownership to homeowners' expenses. An estimate of imputed consumption for homeowners is already available from Brewer and O'Dea (2012), albeit only on a highly aggregated level. In this paper, homeowners are essentially assumed to 'rent their house from themselves'. If such a measure were adopted as a proxy for living standards, the situation of homeowners who have already repaid their mortgage would appear more favourable, especially if they live in an area where house prices and rents have surged *after* they bought their house. If house prices showed no systematic trend over time, this distinction would not matter a lot, because renting and buying a dwelling would then merely be different ways of spreading consumption over time. But house prices in the UK have clearly shown a systematic upward trend over time (more on which in the next chapter).
- The previous chapter has suggested that the monetary equivalent of implicit subsidies should be added to expenses. In many areas of in-kind provision, this is not feasible, but it is not a large problem for near-market equivalents. Social housing is the most important example. It is a near-market equivalent for private rented accommodation, so the difference between social housing rates and comparable market rents in each area should be added to the expenditure of social renters. This would also increase recorded living standards of social renters in high-rent areas. Within the current approach of poverty measurement, this would not be sensible: Social renters in Inner London would suddenly end up in the higher income deciles just because market rents in their boroughs are so high. But in the framework of CBS poverty measurement, this is not a problem: The fact that these households are also faced with much higher living costs is already contained in the local poverty line.

In short, while a replacement of the relative poverty line by the CBS poverty line would produce higher poverty rates when done in isolation, the impact of introducing the whole

package proposed here is ambiguous. This thesis makes the case for replacing the relative (and the absolute) poverty line with the CBS, while also replacing income measures by a broadly defined measure of expenditure. The latter, in isolation, would produce lower poverty rates. It would account for a larger share of underreported benefits; it would augment the recorded living standards of homeowners by imputed housing consumption, and it would augment the recorded living standards of social renters by the monetary equivalent of the implicit rent subsidy they receive. Thus, the introduction of the whole package would mean that higher recorded living standards would be benchmarked against a generally higher poverty line, with the overall impact being indeterminate.

It now becomes clear why the two large components of the package – the change in the way the poverty line is set, and the change in the way living standards are approximated – are not two isolated components which just happen to be compatible. They reinforce each other.

Replacing income with expenditure plus imputed housing consumption would not be feasible within an approach to poverty measurement that cannot account for regional differences in living costs. If it was implemented without a change in the way the poverty line is set, it would produce absurd outcomes: Poverty would drop sharply in the high-cost areas, because the added monetary equivalent of implicit rent subsidies would be very high. But be at the same time, replacing the relative poverty line with a CBS poverty line would not be sensible within the current approach to measuring living standards. While current poverty measures cannot account for the cost of living at all, the CBS poverty line would do the opposite extreme if applied to income statistics: It would 'overaccount' for differences in the cost of living. It would disregard the fact that in the high-cost areas, not everybody is exposed to these high costs to the same extent.

For most components of the CBS poverty line, this is not a problem. Consumption of food and clothing is universal. Consumption of transport and childcare services will be more varied, and the budget designated for these purposes will not apply to every household – but this is the kind of variation by individual circumstances that no approach to poverty measurement can account for. Cyclists who do not use public transport will not need the transport budget, and parents who can rely on their extended families for childcare will not need the childcare budget; but in devising the budget, favourable individual circumstances must be assumed away. The CBS is not a worst-case-budget, but it is a prepared-for-the-

eventuality budget. It will often be overly pessimistic, but this is inevitable as no poverty measure can account for individual circumstances, and the CBS errs on the side of caution.

In the housing component, however, there are systematic reasons why the rent budget in the CBS will overestimate the housing cost needs of many families, and since the rent budget represents such a large component of the poverty line, CBS poverty measurement will be sensitive to this. When applying the CBS poverty line, it is therefore also necessary to account for systematic variation in housing circumstances, and the expenditure/consumption measure proposed here does that.

To use an example from the above results: For some household types, the CBS poverty line for London is about equal to the (equivalised) national median income. If applied to current income statistics, this would produce a regional poverty rate for London of over 40% (author's calculation, based on data from DWP & ONS, 2012). Incomes in London are higher than in all other regions of the country except the Southeast (Phillips, 2008), but the higher incomes in London do not generally compensate for the higher cost of living. This is precisely what a CBS poverty measure should detect – but only to the extent that this really leads to lower living standards in London. If applied to current income data, the CBS poverty line would overestimate poverty in London (and to a lesser extent in other high-rent areas) because it would assume that everybody was either a private renter, or a mortgage payer faced with similar expenses. Yet for social housing residents, or homeowners who bought their house before local property prices exploded, this budget greatly overstates their housing needs. The expenditure/consumption measure proposed here can take account of this. This is why the change in poverty measurement ought to be comprehensive. The CBS should replace the absolute and the relative poverty line, and the income measure should be replaced by an expenditure/consumption measure. These are not isolated proposals, but proposals which reinforce, and indeed almost require one another. This is how, finally, the arguments presented in Chapter 3 merge with the arguments presented in Chapter 7.

8.5 Who are the poor?

As mentioned, data on expenditure augmented by imputed housing income is currently only available as a national aggregate, and data on expenditure augmented by implicit rent subsidies is not currently available at all. It is therefore not possible to show actual poverty

rates for the approach proposed here. But it is not really necessary at this stage either, because the most important information contained in a poverty indicator is not the rate. It is the risk group analysis and the identification of the drivers of poverty. With the information that is currently available, a few general statements about these factors can already be made. This can be done by combining the insights from the literature on expenditure and consumption poverty (Chapter 3) with the results for the CBS poverty lines presented above.

Work status

First of all, expenditure-based and consumption-based measures of living standards show a much closer relationship between labour market attachment and living standards than income-based measures. Even after controlling for income, those in paid employment display higher living standards than those not in paid employment on virtually every measure. They show higher levels of expenditure, lower rates of material deprivation, higher levels of financial asset wealth, a lower food budget share, higher ownership rates of consumer durables, lower levels of debt, a lower incidence of arrears, higher standards of housing etc. (Brewer et al, 2009, pp. 86-111).This remains true even when the self-employed are filtered out. The risk of relative poverty is also negatively associated with work status, but the relationship is much weaker, and more erratic, than for measures of expenditure/consumption. Income-based and expenditure/consumption-based measures do not fundamentally contradict each other in this regard; the difference between their findings is a matter of degree. But it is a large difference of degree. A likely explanation for this is the fact that, as shown in subchapter 3.8, the underreporting of transfer income tends to be more pronounced for in-work benefits than for out-of work benefits.

This difference in risk factor analysis has important implications. The weak relationship between work and income is, in all likelihood, an artefact of the income statistics. The current approach to poverty measurement exaggerates the relative risk of in-work poverty, and therefore understates the relative risk of out-of-work poverty.

Household type

Another difference between income-based and expenditure/consumption-based measures is that the latter identify single parenthood as a poverty risk factor, while the former do not, or only to a minor degree (Brewer et al, 2009). It is not clear whether this is really a

function of income-based measurement per se, or whether it has a more simple explanation, e.g. it might be an idiosyncrasy of the equivalence scale. If the latter, the issue could also be resolved within the current approach, but either way, the change in poverty measurement proposed here would emphasise the poverty risk of this household type more strongly than the status quo. This is exacerbated by the fact that the CBS poverty line for a single adult with one child, for example, is higher than the CBS poverty line for a childless couple. Under the current approach, the opposite is true. Thus, both the change in the poverty line and the change in the measurement of living standards would work in the same direction to emphasise the poverty risk of this household type more strongly. The policy implications, however, are much less clear in this case.

Housing situation and geography

The poverty risk of private renters who do not qualify for Housing Benefit would definitely increase under the poverty measurement proposed here, and in all likelihood, this would be the case in all regions. The reason is simply that the CBS poverty line accounts very directly for rent levels, and real-term rent levels have increased in all UK regions over the period examined above. The current approach cannot remotely account for this; even the distinction between relative poverty BHC and AHC is inadequate for this purpose.

The situation of private renters who do receive Housing Benefit and social renters (with or without access to Housing Benefit) is somewhat more ambiguous. On the one hand, the underreporting of Housing Benefit would play less of a role, as expenditure measures indirectly capture this transfer. The difference between market rents and social rents would also be added to the expenditure of social tenants, as implicit subsidies would be treated as if they were explicit subsidies. These two techniques would increase the recorded living standards of Housing Benefit recipients and social housing tenants. But at the same time, their living standards would now be directly benchmarked against market rent levels, which have been shown to be very high in all regions. These changes work against each other, and their net effect is ambiguous. At least in the very high-rent areas, though, it is probably safe to say that poverty rates under the new approach would be higher than under the status quo. In these areas, the difference between the regional CBS poverty lines and the current national poverty line is so large that it is simply implausible that a change on the other side of the equation (living standards) could cancel this out.

8.6 Policy implications

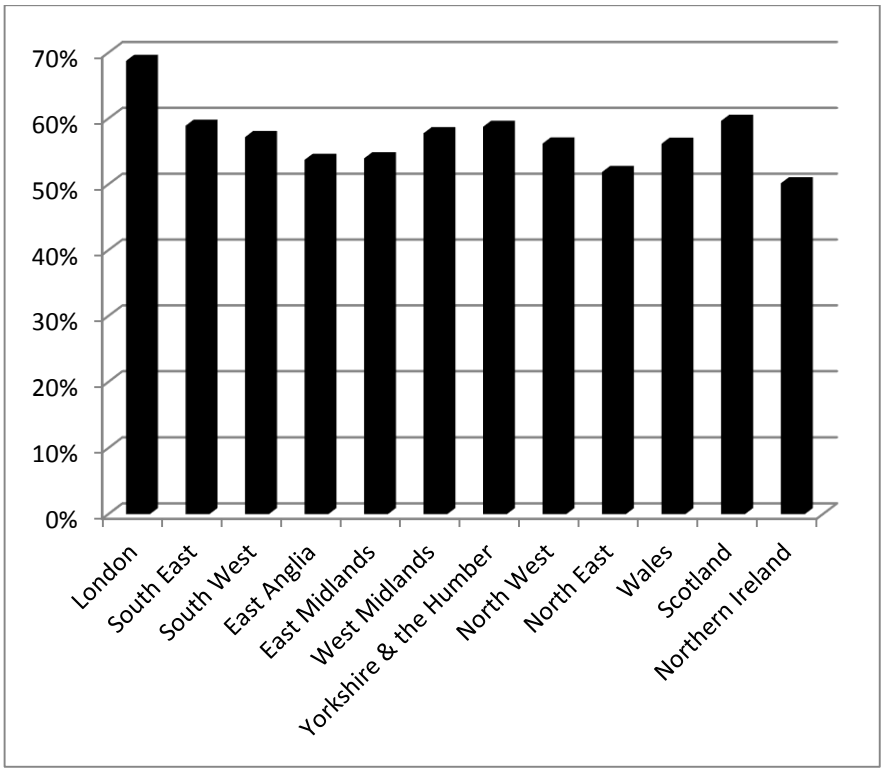
Chapter 4 has shown that studies on absolute living standards emphasise economic growth, while studies on relative poverty emphasise income redistribution. But the role of product market structure and relative prices is not really part of poverty research. This is also true for poverty research in the UK, which is wholly focussed on social policy instruments, especially income transfers and social programmes, while entirely ignoring product markets (see Hills et al, 2009, for an overview).

But the findings of this and the previous chapter suggest that at least for the UK, this is the wrong focus. The high cost of living, not low incomes, is the primary constraint on low-earners living standards. None of this would be especially relevant if these high costs of living were the result of factors outside of policymakers' control, but this is emphatically not the case. There is a vast amount of econometric literature which conclusively establishes that housing costs are largely determined by the degree to which the land use planning system restricts residential development (Brueckner, 1990; Pollakowski & Wachter, 1990; Malpezzi, 1996; Glaeser & Gyourko, 2003; Chi-man Hui & Sze-mun Ho, 2003; Anthony, 2003; Glaeser et al, 2005; Saks, 2005; Andrews et al, 2011; Glaeser et al, 2005a; Hilber & Vermeulen, 2010; Cox, 2011).

Demographia (2011 and 2012) shows that as a historical long-term average, the ratio of regional median house prices to regional median annual incomes (the 'median multiple') used to cluster between values of 2.0 and 3.0 in English-speaking countries.

The graph below shows a back-of-the envelope simulation of what would happen to the CBS poverty line if median multiples (MMs) in all UK regions were to revert to a level of 2.9, while holding the ratio of rent levels to house prices constant. The CBS poverty line for a couple with one child would then fall below 60% of the national equivalised median income in every region except London. This is remarkable because it would still be a 'metropolitan poverty line', and 2.9 would still not be a low MM by international or historical standards.

Figure 8.17: The CBS poverty line for 2 adults & 1 child with MM=2.9, 2009, in % of the median income



Raising housing costs is not the only effect of land use planning restrictions. Cheshire et al (2011) have shown that the planning system also depresses productivity in the retail sector, as an example of a space-intensive industry. Presumably, the same mechanism is at work in other industries that require more than a minimum amount of business space.

There are many other policy options to decrease to CBS poverty line. The net effect of the European Common Agricultural Policy (CAP) is to raise food prices in the EU by between one tenth and one fifth, the exact figure differing from year to year (OECD.StatExtracts, 2012a). The distortive effects of the instruments the CAP comprises have long been theoretically and empirically well-established, and there is a broad agreement in the literature that a removal of such measures would lead to a net welfare gain (e.g. Thies and Porche, 2007; Anderson et al, 2006; Hoekman et al, 2004). This is corroborated by international evidence from countries which have abolished CAP-style instruments (see Evans et al, 1996; Kalaitzandonakes, 1994; Sandrey & Scobie, 1994).

Current energy policies also have a major impact on gas and electricity prices for households (DECC, 2010) and industry (Lewis & Taylor, 2012, pp. 29-30p; ICF International,

2012). It is well-established that the aim of these policies – reducing CO2 emissions – could be achieved in much more efficient ways, such as a carbon tax or a cap-and-trade system (Frondel et al, 2009; Nordhaus, 2007).

In short, policymakers have a very high degree of control over many determinants of the level of the CBS poverty line. This does not mean that there is a simple or uncontroversial way of tackling CBS poverty. But it does mean that poverty research should at least pay attention to systematic, politically malleable drivers of the basic cost of living. At the moment, these issues are not even part of the research agenda, which evolves exclusively around the tax and benefit system and social policy programmes.

8.7 Conclusions

For most household types and in most regions, the cost of a consensually established basket of non-housing necessities is between 35% and 50% of the median after housing costs, even though there is a lot of variation across regions and between household types. Yet it is safe to say that the relative poverty line AHC greatly overstates the amount of resources that households need to stay out of poverty in modern Britain. However, as soon as housing costs are added, the cost of this consensual basket of necessities jumps to between 50% and 80% for most regions and most household types. There is now an even greater amount of variation across regions and household types, but in general, the relative poverty line BHC now underestimates the cost of being fully included in society, at least for those who are faced with the full cost.

This does not mean that relative poverty measures underestimate the true extent of poverty. The total cost of attaining full social participation is higher than the relative poverty line in most regions, but at the same time, income measures do not take account of important determinants of living standards. Income from Housing Benefit is, to a large extent, underreported, and in high-rent areas, this can represent a substantial proportion of income. Social housing residents are, to some extent, shielded from developments in the housing market. And finally, housing costs in the UK have not always been this high. Those who have bought a house before the surge in house prices started may have expenses below the CBS poverty line, but presumably much higher living standards than those on similar incomes who are faced with current rent/mortgage rates. This is why a

simultaneous change in the poverty line and the measurement of living standards has been proposed here.

The rate of CBS poverty may be higher or lower than the relative rate, but the most important information that a poverty measure reveals is not the rate. CBS poverty would have completely different drivers. Its most important determinant would be the cost of housing, followed by other aspects of the cost of living, part of which is itself correlated to housing costs.

One would therefore expect the determinants of the cost of housing, alongside with the determinants of the cost of other CBS elements, to be an essential part of poverty research. Yet it is not part of poverty research at all. Poverty research in the UK is wholly focussed on social policy instruments, especially income transfers and social programmes (see Hills et al, 2009). The determinants of the cost of living are ignored.

The findings of this and the previous chapter suggest that at least for the UK, this is entirely the wrong focus. If the aim is to find cost-effective anti-poverty solutions, poverty research in the UK would have to reorient itself completely.

9. Conclusions and outlook

9.1 What this thesis has tried to achieve

This thesis has made the case for measuring poverty in a different way, and for addressing it in a different way as well.

It has begun by demonstrating, in Chapter 1, how crucial the role of poverty measurement is for poverty research. The choice of the poverty indicator is not a technical detail; it is not a question comparable to the choice of the equivalence scale or the purchasing power conversion formula. Rather, it is by far the most important decision in a poverty study, because the study's outcomes are not just sensitive to this choice, they are virtually determined by it. This has been shown by reviewing a number of studies which apply two or more poverty measures to the same population, and compare the results. Whether these are micro-level studies on poverty risk groups and risk factors, or macro-level studies on time trends, it is a consistent finding that different measures produce different outcomes. This is seldom reflected in the poverty debate, where poverty measures are often treated as if they were close substitutes for one another.

While Chapter 1 has concentrated on statistical properties of different indicators, Chapter 2 has concentrated on the ideas they (attempt to) embody. More precisely, it has documented the history of poverty research in the UK, highlighting the interplay of theory and measurement at different times. Poverty research has started with a theory of poverty as impeded physical functioning. In this theory, poverty can be defined in an objective and universal way, because 'needs' are seen as physically and biologically determined. This theory found its expression in the Budget Standard Approach (BSA), a poverty measure in which the poverty line is defined as the cost of a basket of goods and services necessary for physical functioning. BSA studies blossomed in the interwar period, but came to an abrupt end in the early 1950s, when poverty in this most basic sense was about to disappear. Yet in retrospect, poverty researchers discovered serious flaws in the BSA methodology, which cast doubt on the then dominant interpretation that poverty had been eradicated and was now an issue of the past. Peter Townsend and others pointed out that poor people's actual consumption patterns had very little in common with the ascetic, extremely economical pattern implied in the BSA baskets. They did not just argue that the BSA baskets assumed

an unrealistically high level of spending efficiency; they also questioned the whole notion of 'needs' as being universal and biologically/physically determined. 'Needs', they argued, were primarily socially determined, and to a large extent, spending was determined by the need for social inclusion. The cost of social inclusion, in turn, was seen as linked to overall living standards, and assumed to rise with them. Eventually, this rethinking of poverty lead to the adoption of relative measures, with the poverty line set as a fixed fraction of average incomes. This redefinition would have far-reaching consequences later on. From 1983 onwards, relative poverty exploded, giving rise to a particular 'poverty narrative'.

This narrative was a product of the new relative measure which had emerged in the meantime. It could not have arisen if Rowntree's approach of simply making the BSA baskets a bit more generous from survey to survey had been continued. Chapter 3 has documented how the living standards of the least well-off have evolved over recent decades, with most measures showing unspectacular but steady improvements. Yet the more important finding of Chapter 3 is that while low-earners' living standards have improved on the whole, there have also been retrograde steps in some important dimensions. These appeared to have more to do with changes in relative prices rather than incomes per se, and they are not detected by current poverty measures. In addition, Chapter 3 has shown that in the lower percentiles of the distribution, incomes are no longer a reliable guide to living standards. Underreporting of transfers, combined with increased income volatility, has undermined the reliability of these data. Expenditure data have been shown to be a better guide, since they are more closely correlated with other, more direct measures of living standards. They are also simply more plausible: There are more than a million people with reported incomes close to zero, while for expenditure, there is a clear lower bound. On the whole, Chapter 3 demonstrates how little current poverty measures reveal about the actual underlying living standards. It has compiled a profile of what the lives of the least well-off in modern Britain look like, and the fact that a dissertation on poverty requires a separate chapter to document this can itself be seen as an indictment of modern poverty research. Ideally, poverty measures should already contain information about this. If they did, it would not be necessary to discuss poverty rates and living standards in separate chapters.

Chapter 4 has continued with a discussion of the macroeconomic policy implications resulting from studies which use different poverty measures. Given how these measures are mathematically constructed, it is obvious that they respond to different factors. But the

important question is whether this also causes them to produce systematically different policy conclusions in practice, and if so, the even more important question is whether these policy conclusions can be in conflict with one another. Chapter 4 has argued that the answer to both questions is yes – but problematically, studies on relative poverty do not point this out. Studies on absolute living standards at the lower end acknowledge that the policies they recommend would not necessarily lead to a more equitable income distribution. Studies on relative poverty either do not address the question, or if they do, they dismiss the possibility of adverse impacts on absolute living standards. In the country samples which these studies typically cover, a trade-off is indeed not recognisable. But Chapter 4 proceeded to integrate the studies on the determinants of relative poverty into the wider economic literature on the relationship between taxation, government expenditure and overall economic performance. It showed that 'absence of evidence' is not the same as 'evidence of absence': The weight of the economic literature suggests that beyond a certain level, redistributive taxation has adverse effects on economic performance. Chapter 4 went on to discuss the particularities of the Scandinavian economies, because this is a region which occupies a special place in the poverty literature. Chapter 4 did not question the empirical findings of the studies on the determinants of relative poverty, but interpreted these findings in a very different way. The experience of the Scandinavian countries does not 'refute' the findings of 'orthodox' economic models. Instead, these countries compensate for their high tax levels through exceptionally good performance on almost every other determinant of economic competitiveness, while also representing a cultural environment that is uniquely suited to cope with high levels of redistributive taxation. Nevertheless, even in Scandinavia, adverse effects can be recognised in within-country time series studies.

The bottom line of Chapter 4 was that there are trade-offs in anti-poverty policies. If these policies come at a cost, poverty indicators have to fulfil higher quality standards. The 'burden of proof' that the side-effects are justified is on them. Chapter 5 therefore enquired whether relative measures really are plausible and robust measures of poverty. The chapter began with a critique of previous studies which had dismissed relative poverty, rather than engage with the concept. It then went back to the origin of the concept, and showed that the connection between theory and measurement is not as straightforward as the poverty literature implies. There was never a one-way street leading from the new understanding of poverty to the adoption of relative measures. Rather, in adopting relative measures, poverty research has taken a leap of faith. From the rather general insight that

needs are context-specific rather than universal, and (at least) as much about social inclusion as about physical functioning, it did not automatically follow that the poverty line had to be a fixed fraction of median incomes. And yet at some point, relative poverty figures developed a life of their own, and their synonymity with the broader idea was just taken as a given. This has been shown to be problematic, because there is nothing special about the contemporary national median as a reference point. It is an arbitrary convention which has developed a path-dependency, and yet, the outcomes of relative poverty studies are highly sensitive to this specification. Chapter 5 experimented with a few variations of relative poverty, and showed that plausible changes which remain entirely within the relative approach can completely overturn the findings. Substituting a regional or supranational median for the national one, adopting a notion of 'intertemporal relativity', changing the elasticity of the poverty line with regard to median incomes – each of these variations has a profound effect on the results. At the same time, relative measures do not even measure relative living standards. They fail to capture many important factors that affect low-earners' living standards in both relative and absolute terms. In particular, they are completely blind to developments in the product markets. They study one blade of the scissors in isolation, ignoring the structure of relative prices, or the availability of market segments tailored to low-earners' budgets. Relative measures are neither robust, nor comprehensive, nor plausible.

Unfortunately, as Chapter 6 went on to show, the same is true for quasi-absolute measures. Material deprivation measures, while an improvement, suffer from other shortcomings, and simply packaging all measures together is not a solution either: It would only be a solution if their flaws cancelled each other out, or at least, if they complemented one another in a sensible way. Chapter 6 then turned the critique into a positive agenda. It changed the focus from 'This is why current poverty measures are flawed' to 'This is what a poverty measure would have to be like to avoid these flaws'. It documented two interesting concepts which avoid some of the flaws of current measures: consensual material deprivation, and qualitative (focus group discussion-based) consensual budget standards. Neither of the two approaches was in itself a convincing alternative, but Chapter 6 showed how their strengths and weaknesses were complementary. It went on to blend the strong aspects of both approaches into a new one, resulting in a quantitative consensual budget standard. The CBS benefits from the fact that large-scale surveys (as opposed to focus group discussions) on what constitutes 'necessities' show a robust consensus, which displays no major systematic variation across regions or subgroups. A CBS should convert

this consensus into a tangible basket. The resulting measure is not 'relative' or 'absolute'. It is context-specific. It shows the cost of attaining consensually identified necessities.

Chapter 7 went on to do construct the corresponding basket, with price data gathered from a variety of sources. Many of the findings produced in this way complemented information from Chapter 3. The fact that food budgets rose again from the mid-2000s on, that clothing budgets fell, that fuel poverty increased, and above all, the repeated finding that housing costs had become a much larger strain for low-earners – all of this was fully compatible with the way in which the relevant sub-poverty lines evolved. The way in which the sub-poverty lines in Chapter 7 marry up with the living standard measures in Chapter 3 could be an idiosyncrasy of this period, but it also be a validation of the CBS method. It could be an indication that the CBS really does capture the product market developments which affect low-earners.

Chapter 8 went on to present the resulting CBS poverty lines, which are available separately for each household type and each region. The most salient finding was this: Before housing expenses were added, the CBS poverty line was far below the relative poverty line AHC, and this was true for every household type and every region. However, as soon as housing costs were added, the CBS poverty lines jumped to levels above the relative poverty line BHC for most household types and in most regions. This simply shows that high housing costs are a more pressing problem than low incomes as such. The figures have to be interpreted in context, however. One key proposal advanced in this thesis is that relative and absolute poverty lines should be replaced by the CBS poverty line. The other key proposal is that income should be replaced by expenditure/consumption as a proxy for living standards. The first proposal produces a (generally) higher poverty line, the latter proposal produces (generally) higher recorded living standards. The underreporting of transfer income, most forms of consumption smoothing, and the value of benefits in kind, are better accounted for by expenditure/consumption data than income data. It is therefore not clear whether the CBS poverty rate would ultimately be higher or lower than the relative poverty rate. However, the most important information produced by a poverty measure is not the rate. It is the risk group analysis, the geographic profile, the time trend, and the correlates. It is safe to say that in these respects, there would be profound differences between CBS poverty and relative poverty, and Chapter 8 has listed some of those differences.

With all this in mind, Chapter 8 then went back to the theme of Chapter 4: the policy implications resulting from different poverty indicators. Relative and absolute measures, as

Chapter 4 had documented, direct the attention to 'the big picture', the characteristics that define a social and economic model as a whole. As far as the expenditure side is concerned, this would also be true for a CBS measure. But CBS poverty would also depend on the cost of basic necessities, which is clearly not a 'big picture' area. It is a fairly practical matter, requiring policy solutions that would be compatible with a variety of economic and social models. But it would also mean that a CBS poverty agenda would have to be highly country-specific and time-specific. It could not be easily derived from the kind of cross-country studies that Chapter 4 has reviewed. Deriving a CBS policy agenda would mean studying how different layers of the CBS poverty line have evolved, and identifying the drivers behind their evolution. To the extent that these drivers turn out to be outside of policymakers' control, there are no policy implications. But to the extent that the drivers are policy-related, the next step would be to enquire what it would take to ensure greater affordability. In the UK, there is a lot of room for policy measures that would improve affordability in important areas.

In summary: If taken up on a larger scale, the approach to poverty measurement proposed here could reorient the focus of poverty research. It would point to areas which are currently not part of the research agenda at all, because the current instrumentarium of measurement is not suitable for them. At the moment, poverty research in the UK is heavily focussed on social policies (see Hills et al, 2009). Issues like the ones which have been discussed in this and the previous chapter are not taken into account, or only very indirectly so. The approach proposed here has the potential to broaden the scope of poverty research, and make it more receptive to important problem areas that cannot be detected with the current measurement toolkit.

The claim made here is not that focussing on product markets and living cost issues was per se more important than the traditional social policy issues. Rather, this depends entirely on what a country's initial situation is. Presumably, there are countries in the world where such a focus would be inappropriate and/or irrelevant. But in the case of the UK today, a case can be made that the traditional social policy tools are already being used extensively, while the issue of basic living costs has long been neglected. Chapter 4 has shown that as a proportion of GDP, public social expenditure in the UK has already reached Scandinavian proportions, even if poverty research retains the dichotomy of a high-spending 'Nordic model' and a low-spending 'Anglo-Saxon model'. If social policy instruments do not currently fulfil all of their objectives, it is not because of an underuse. It is because the

effectiveness of these instruments is blunted when they are used in an environment of high basic living costs.

Neither the CBS nor the focus on living costs are panacea. Poverty measurement is not an exact science; there are many unresolved issues in this discipline, and the CBS leaves a lot of them unresolved. Even if all the statistical problems addressed while constructing the CBS could be resolved in a more sophisticated future version, it would still be a very imperfect measure that would miss a lot of variation. Individual needs vary much more than the CBS could ever hope to account for. Neither would the adoption of a CBS measure do much to address the divisive issue of whether reductions in inequality are more important than economic growth or vice versa. At best, within a CBS poverty framework, this issue would no longer have to be at the centre of poverty research, but this does not mean that it would be resolved.

There are also clear limits to how much can be achieved on the living costs side. There may be large efficiency reserves in some sectors, but only trivial ones in others. This thesis has focussed on cases where outcomes that come close to win-win situations are feasible, due to the existence of efficiency reserves. But while such cases exist, they are not necessarily the rule. The aim of cutting living costs in a particular area will often conflict with some other valid policy objective. Difficult trade-offs would not go away. The type of trade-off described in Chapter 4 would play less of a role, but this does not mean that it would always be replaced by win-win situations. Difficult trade-offs would often just be replaced by other difficult trade-offs.

Nevertheless, a strong case remains for rebalancing the anti-poverty agenda in the way described here. If one possible approach (the use of social policy instruments) is already used extensively, while another approach (focussing on living costs) is neglected, then the latter approach will still be characterised by high 'marginal benefits' and low 'marginal costs'. The CBS could thus be a useful tool to identify cost-effective anti-poverty policies.

9.2 Suggestions for future research: How to improve the CBS

Chapters 7 and 8 have presented the prototype of a new poverty measure. There are, of course, a number of ways in which this measure could be further improved if it was more widely adopted and if the corresponding research funding was available. This subchapter

will develop proposals for how this could be done. It will also show how additional quality tests and feedbacks can be devised.

Data collection, Part 1: Replacing the PSE survey with a CBS survey

The obvious downside of the prototype CBS developed in this thesis is that it had to be constructed from datasets which were not designed for the purposes of this thesis. This has led to a number of limitations. The data sources used here were second-best solutions which were suitable enough for constructing a prototype, but an ideal CBS would be built on datasets explicitly tailored to its purposes.

The PSE has been used to derive a consumption basket, but the PSE was never devised for this purpose, and if it had been, it would have been a rather different survey. The PSE was devised as the basis for an indicator of material deprivation, and as a result, it is specified on a high level of generality. It does not contain individual products, but product categories and consumption purposes. A somewhat ad-hoc method of matching concrete products to the rather vague descriptions of the survey participants therefore had to be found. The use of expenditure surveys is a plausible way of doing this, but there is ultimately no guarantee that the resulting basket really reflects the kind of consumption standard that the survey participants had in mind.

For some of the CBS basket's components, this did not pose a problem. The food and clothing sub-baskets are highly 'diversified' baskets, in which no single item has a discernible influence on the respective sub-poverty line, and in which most items have numerous substitutes in the same price range. It would therefore be possible to compile dozens of alternative sub-baskets for the same budget. This is why, for example, no separate sub-poverty line has been calculated for a 'vegetarian food basket': It is clear from a glance at the price data that a vegetarian alternative would be easily within the reach of the same budget. This does not, of course, mean that any specification of the food and clothing baskets is as good as any other. But it does mean that once a plausible method of compiling the basket has been found – and the Canadian MBM, based on real-world consumption habits as recorded in expenditure surveys, certainly fits that description – the resulting basket can tolerate a lot of variation. Dietary habits or clothing habits would have

to change dramatically and in a short time to render the corresponding CBS sub-baskets irrelevant.

But as acknowledged in Chapter 7, the PSE survey's high level of generality can pose a problem for the social participation and the transport sub-baskets. There are two reasons why this problem arises. Firstly, these two categories are dominated by a small number of relatively large purchases, which makes them more sensitive to what exact product is chosen for inclusion in the basket. Secondly, it is for these categories that the PSE survey is at its most general. The former problem cannot be solved, as these purchases are inherently 'bulky'. But the second problem could be solved by a different survey design, a design tailored to the purposes of a CBS basket rather than a consensual material deprivation list. At least for categories like these, a CBS survey would have to ask more specific questions than the PSE survey.

The solution is not, however, to replace broad categories with individual products, because the high level of generality has the advantage of making the questions more encompassing. A survey which only offered specific products would be more sensitive to which exact products the survey designers choose to include. The survey might then fail to identify products which most survey respondents do consider necessities, but which happened not to be among the options offered in the survey. A very specific survey would therefore risk missing some of the items that constitute necessities in the eyes of a majority, it might not adequately reflect the consensus on necessities. A survey that offers general categories rather than specific products is a lot less sensitive to what the researchers choose to include, because the categories in the PSE survey are so broad that it is harder for a necessity to 'escape' detection. It may be difficult to put a price tag on a general category like 'a hobby or a leisure activity'. But it is this very breadth which enables the PSE to identify a general consensus even if the survey designers have little knowledge about what precise activity the respondents might have in mind. If the entry 'a hobby or a leisure activity' was replaced by one or several more specific entries, it might fail to capture the views of those who do consider a hobby/leisure activity a necessity, but just not those specific examples that happen to be listed in the survey. On a more basic note, it would also risk 'splitting the vote'. If, for example, 30% of respondents consider a spectator sport season ticket a necessity, and another 30% consider membership in a social club so, then

neither entry would qualify as a necessity, even though the combined vote would have been 60% if only the question had been phrased in slightly more general terms.

The solution, then, is not to replace the product categories with specific products, but to introduce a second layer into the survey. The first layer would consist of broad product categories, the second layer would consist of more specific ones, and they would be linked through a question like "If yes, which of the following?" For the above-mentioned example, the first layer would look just like in the PSE survey:

Table 9.1: An excerpt from the hypothetical 'CBS survey'

	Necessary	Desirable
A hobby or leisure activity		

But the difference would be in the second layer, which could look like this:

If you ticked 'necessary', which of the following would you count as a suitable hobby or leisure activity? (You can choose more than one option.)	
• A season ticket for a spectator sport	
• Membership in a social club or association	
• Membership in a fitness/leisure/health club	
• Dining at a restaurant in the local area at least once a month	
• Subscription allowing access to cultural events/activities	
• None of the above	

Survey designers might still pick the 'wrong' activities, but at least, this error could then be detected, because it would show in a high proportion of respondents choosing the 'none of the above' option. Vote-splitting would not be a problem in this format: A price could be collected for each of these options, including for combinations, and the price which enters the basket would have to be sufficient to afford the activities chosen by the majority of the respondents. This is illustrated below with a stylised, hypothetical example, in which 80% of the respondents tick the 'necessary' box in the first layer. These 80% are then redirected to the second layer to identify specific products. The products and product combination which are chosen by at least one respondent are listed below, sorted by their price, which is shown in the second column. The third column shows how many respondents chose the respective activity or combination of activities, expressed as a share of *all* respondents, not

just those 80% of respondents that ticked the 'necessary' box. The fourth column shows their cumulative share. The price which would enter the CBS basket is 35 gold coins. Even though only 20% of respondents have chosen a combination of activities that costs exactly 35 coins, another 45% have chosen activities which cost less, so a budget of 35 coins would allow the pursuit of the activities chosen by them as well.

Table 9.2: Selecting the activity with the 'right' price for the CBS

	Price in gold coins	% of respondents choosing this activity	Cumu-lative
A season ticket for a spectator sport	10	5%	5%
Membership in a social club or association	15	10%	15%
Membership in a fitness/leisure/health club	20	5%	20%
Dining at a restaurant in the local area at least once a month	25	5%	25%
A season ticket for a spectator sport AND Membership in a social club or association	25	5%	30%
Subscription allowing access to cultural events/activities	30	10%	40%
A season ticket for a spectator sport AND Membership in a fitness/leisure/health club	30	5%	45%
A season ticket for a spectator sport AND Dining at a restaurant in the local area at least once a month	35	20%	65%
More expensive combinations	>35	15%	80%

The example is, of course, somewhat idealised. The activities listed in the second layer are still fairly general, there will be a price range for each of them rather than one single price. Even if this methodology was adopted, the CBS would still require a degree of standardisation. But again, poverty research is not an exact science. The above specification would probably come closer to identifying and pricing majority perceptions of necessities than any methodology currently employed – at least if conventional pitfalls of survey design, like sampling errors and non-randomness in missing responses, can be avoided.

A similar two-layer method could be used for the transport and the childcare budget. In this way, a genuine CBS survey could be compiled, and replace the PSE. It would not be superior to the PSE in every respect, but it would be much more appropriate for the identification and pricing of consensually defined necessities.

Data collection, Part 2: Replacing CPI/RPI price quotes with CBS price quotes

Chapter 7 has described a specific kind of consumer, defined by particular characteristics of their consumption behaviour. This consumer is, to a degree, price-conscious, but they are not especially well-informed about local price differentials, and not especially mobile. They are not able, or not willing, to expend discernible search efforts, but if a low-cost option is easily enough available on a permanent basis, they will choose it.

This rather detailed concept has then been approximated in a very ad-hoc way, by choosing prices at the 25th percentile of the price distribution. While close enough for a constructing a prototype, this approximation is clearly not ideal. The reason why it has been chosen nonetheless is, again, that the CBS constructed in this thesis had to rely on a dataset which was compiled for a completely different purpose. The CBS was built on the raw data from which the CPI and the RPI are derived. Inevitably, these price quotes are gathered in a way which suits the purposes of the CPI and the RPI, not those of the CBS. The purpose of the CPI/RPI is not to allow a reconstruction of the consumption habits that match a particular consumer profile. Their purpose is simply to gather a large number of price quotes, in order to build broad aggregates. The datasets contain no information on to the characteristics of the product behind any given price quote, or on its availability, target market etc., because this information would not be relevant for the construction of aggregate price indices. But it is relevant for the CBS. Chapter 5 and Chapter 6 have placed a lot of emphasis on the issue of market diversification and no-frills sectors, and the inability of existing poverty measures to incorporate information on these phenomena has been identified as one of their major weaknesses. Yet even the prototype CBS constructed in this thesis has not fully resolved this issue. Whether the price quotes used in Chapter 7 and Chapter 8 really do relate to no-frills sectors and low-budget stores cannot be verified, as the price datasets simply contain too little information on each price quote.

An ideal CBS would be constructed from datasets specifically gathered to meet CBS purposes. This would require a separate price collection process, independent of the existing one which produces the datasets used in this thesis (although the two could be integrated). Rather than relying on a price distribution for all prices, CBS price collectors would deliberately seek out discount stores, provided that these are realistically accessible for low-earners without extensive search efforts. Where this is not the case, they would seek out no-frills products in more widely accessible stores. CBS price collectors would ignore most of the rest of the market, and concentrate on the segment which is relevant for

the construction of a poverty line. In this way, the above-mentioned criteria to define the 'CBS consumer' – moderately price conscious, not very well informed, not very mobile – would be met. The CBS consumer cannot be expected to be aware of every high street store and corner shop in their area, but they can be expected to be aware of a large discount supermarket. In most areas, CBS price collection can be limited to a small number of large discounters, because the CBS consumer is not expected to shop around and compare prices. They can be assumed to buy most, if not all, of their weekly essentials in one single discounter, because in this way, search effort is minimal.

The price collection process could take advantage of the fact that supermarket chains rely on sophisticated market research. They will have extensive data on who their customers are, what their catchment area is, what type of consumer buys which products etc. To the extent that they are willing to share their data (which will be confidential) with poverty researchers, this could be the starting point for CBS price collection. Market research data would allow CBS price collectors to identify the relevant stores and the relevant products from which the prices in the CBS basket should be taken. This will be an identification based fully on revealed preferences. It would not rely on researchers' judgement, or on focus groups discussing hypothetical consumption habits, but on actual, observed consumption habits.

The sub-category where CBS price collection would differ most drastically from CPI/RPI price collection is housing. As described in Chapter 7, the price quotes for rental rates in the CPI/RPI (or even the price quotes gathered by LHA Direct) do not compare like with like. This is why Chapter 7 had to construct a hybrid measure combining data from the CPI/RPI price quotes with data from LHA Direct, but even so, the fundamental problem with the rental price quotes currently collected has not really been solved. The fundamental problem is that there is currently no dataset of rental price quotes which refer to the same basis. Price quotes are taken at face value, without accounting for the fact that they differ widely in what ancillary rental costs they include. Quotes can range from full-package rents, where even optional items like broadband connection are already included, to bare-bones rents, which include no bills at all. Most quotes fall somewhere in between, including some bills while excluding others, and they also differ in the extent to which the corresponding flats are furnished. As a result, the resulting rental 'price distribution' is not really a distribution at all. There is no way of knowing whether a flat at e.g. the 33rd percentile is really cheaper than a flat at e.g. the 50th percentile, or whether it merely includes fewer

bills (which is why, in Chapter 7, the selection of prices according to percentiles has been dropped for the housing category).

CBS price collectors would have to record rents in a very different way. They would have to record not just the face-value quote, but also an account of what is and what is not included in each quote. With that information separately recorded, rental price quotes could be converted to a common basis. What that basis is is not especially important as long as it is used consistently. This is illustrated below with a hypothetical numerical example of three rental price quotes (in gold coins) which include different bills. On the face of it, the rent is lowest for Flat 1, followed by Flat 2, followed by Flat 3.

Table 9.3: Non-standardised rent price quotes

	Flat 1	Flat 2	Flat 3
Refuse collection fees included?	yes	no	no
Water rates included?	no	yes	no
Heating bills included?	no	no	yes
Recorded rent	115	120	125

But in this example, it is possible to allocate standardised numerical values to each of the bills: it is assumed that refuse collection typically costs 10 coins, water rates 20 coins, and heating bills 30 coins. Rents can then be converted to a common basis. That basis could be an all-inclusive rent, in which case the typical cost of the non-included bills would be added to the face-value rent. Or it could be a pure rent excluding all bills, in which case the cost of the included bills would be subtracted from the face-value rent. The result is the same in both cases: The order of the price ranking reverses.

Table 9.4: Standardised rent price quotes

	Flat 1	Flat 2	Flat 3
Recorded rent	115	120	125
Standardised rent; base: all-inclusive	165	160	155
Standardised rent; base: nothing included	105	100	95

The CBS would then not contain the rent that a tenant actually pays, but an ‘as-if rent’; the rent that they would pay if a number of pre-specified bills were included/excluded. This as-if rent would not be an indicator of value for money. There may be good reasons why one flat is more expensive than another (it may be aesthetically more attractive, closer to a park etc.), but these reasons would be optional features that tenants could do without. Ancillary rental costs, in contrast, are not optional. If they are not counted as part of the rent itself,

they have to be included elsewhere in the CBS, via a separate allowance. The as-if rent would therefore allow the identification of genuine low-cost rents, as opposed to rents that merely leave most bills to the tenant.

This would require a separate price collection process, or at least a significant change in the way in which rental rates are currently recorded. The purpose of the current datasets is to derive aggregate rent indices. If this is the purpose, it is not a problem if the individual quotes are not always comparable to one another: they are all aggregated anyway, and if enough quotes are recorded, those that include more than most and those that include less than most will cancel each other out. For the purposes of the CBS, though, it does matter whether the price quotes are comparable, because if they are not, no meaningful rent distribution can be established.

Evaluating the CBS basket through a follow-up survey

The above proposals could significantly improve the CBS prototype developed in this thesis. This 'first-best CBS' would start with a survey that, unlike the PSE, would be explicitly designed to produce a consumption basket, rather than a list of necessities. It would therefore ask more detailed questions than the PSE, or rather, it would introduce a second layer of more detailed questions. The first-best CBS would also consist of price data that are specifically selected to match its purposes, which are very different from the purposes of an aggregate price index.

Even so, it would still be useful to devise additional quality checks. Once the CBS basket has been completed, the most important question would probably be whether it really represents the kind of consumption standard that the original survey participants, who established the consensually defined necessities in the first place, had in mind. The most straightforward way to achieve this is to ask them. There could be a short follow-up survey to the original CBS survey. Survey participants would be shown the full basket, and asked to validate it. To simplify, the relationship between the CBS survey participants and the researchers compiling the CBS would be akin to the relationship between a wine consumer and a sommelier. The wine consumer describes, in layman's terms, what qualities in a wine they are looking for. On the basis of this description, the sommelier then tries to select the specific product which best matches it. But the sommelier cannot be completely sure whether they succeeded until the consumer has actually sampled the wine, and approved. This would be the role of the follow-up survey. It could consist of a question like:

"A few weeks ago, we presented you with a list of goods and services, and asked you to identify which of these you considered necessary to enable full social participation in modern Britain. On the basis of the responses collected, we have now compiled a consumption basket. You can see the full basket on the following pages. Please take your time to go through this basket, and let us know whether it describes the kind of living standard you had in mind when you were completing the original survey.

This feedback mechanism could allow further improvements in the CBS.

Testing the public's understanding of the CBS survey

One of the arguments made repeatedly in this thesis is that current poverty measures are not well understood, and create widespread misunderstandings. It has been argued that the CBS would avoid these problems by virtue of its tangibility. The precise theory of poverty underpinning it may not be easy to communicate, and neither are the technical details of its construction, but the CBS basket itself should be intuitively accessible. A newspaper article on CBS poverty could, for example, summarise the contents of the basket with a small information graphic, thus clarifying what kind of living standard the CBS poverty line corresponds to.

However, while there are good reasons to *expect* CBS poverty to be widely understandable, there is no proof that it really *will* be. This could be the final litmus test once the CBS has been in use for a while. It could be tested in, for example, a study where survey respondents are presented with a short news article on CBS poverty, and then asked to summarise it in their own words, and/or asked to answer specific questions about it. In particular, such a study would have to test whether people understand what kind of poverty CBS poverty is. Ideally, the answers to the following five questions would be 'yes':

1. Do people understand that CBS poverty is different from destitution/ subsistence poverty?

2. Do they understand that it is not a measure of inequality?

3. Do they understand that the composition of the CBS basket can change over time?

4. Do they understand that the CBS poverty rate responds to price changes as well as changes in expenditure?

5. Do they understand that the basket is selected by consensus, not researchers' judgement?

If most people understand most of those issues, the CBS would have fulfilled its purpose.

9.3 Suggestions for future research: How to use the CBS

The CBS should replace measures of relative poverty and absolute poverty, both for research and policy purposes. This would require the CBS to be published on an annual basis. This could not be done immediately, because it is, admittedly, a much more demanding measure to compile than relative and absolute measures. But the highest hurdle is the initial launch. Once it has been established, keeping it up to date is much less of a challenge.

CBS poverty figures could then published annually in the 'Households Below Average Income' (HBAI) series compiled by the DWP and the ONS, in the same format in which relative and absolute figures are currently published. The HBAI would then contain CBS poverty rates for the population as a whole, as well as differentiated by household type, occupational status, region, ethnicity, age of the household reference person etc. In the medium term, it could also be supplemented by a measure of persistent CBS poverty. Like with persistent relative poverty, this would require tracking households' poverty status for a number of years, and studying the movements into and out of poverty. Relevant research questions would be: What is the average duration of CBS poverty? What share of the CBS poverty population is poor for longer than a year? In what respect do households which move out of CBS poverty after a year or less differ from those whose CBS poverty status is more protracted? Among those who move out of CBS poverty, how many fall back into CBS poverty again, and in what respect do they differ from households which move out of CBS poverty for good?

The current government, as well as the last, is aiming to meet target levels of relative and absolute child poverty by 2020. Such targets could also be specified for CBS poverty, for children or any other population subgroup, depending on political priorities.

Research on the impact of government policy decisions on relative and absolute poverty is currently conducted by institutions like the Institute for Fiscal Studies. Most of their

poverty-related studies are simulations of the impact of changes in the tax and benefit system on poverty rates. These can be changes that are really being considered by the government, or hypothetical changes. Through such simulations, the impacts of changes which work in opposite directions can be separated. For example, one of the institute's major poverty forecasts has shown that the introduction of the new Universal Credit will, on its own, decrease child poverty rates. However, changes elsewhere in the tax and benefit system, and especially a slower uprating of benefit payments, will increase them. The latter effect is forecast to more than outweigh the former (Brewer et al, 2011).

For poverty studies of this type, a replacement of relative and absolute measures with a CBS would not cause any disruptions. These studies could continue undisturbedly, because they are just as applicable to CBS poverty rates as they are to relative or absolute rates. The only major change would be that these studies would have to cope with one additional unknown: The impact of a change in tax/benefit rates on income can be estimated very precisely (in a static perspective), but the impact on consumption is a more roundabout one. For example, an increase in a benefit payment might not fully translate into an increase in consumption, because a share of it might be saved rather than spent. Models of this kind would therefore have to incorporate a group-specific consumption function. But this can be achieved, and in fact, there are IFS studies which have already done this, albeit in a different context (see Brewer et al, 2006).

Taken together, up until here, this means that even if the CBS fully replaced relative and absolute measures, there would still be a considerable degree of continuity in poverty research. A lot of the current research could continue with only minor alterations.

But the CBS would add an entirely new pillar to this. Research on the determinants of product market prices in different sectors of the economy would now have to be added to poverty research. As has been repeatedly critiqued throughout this thesis, these determinants are not currently part of poverty research at all. If the CBS was adopted, the focus on what has driven recent changes in house prices, energy prices etc. could become just as important for poverty research as the focus on changes in benefit levels – and it could conceivably become more important.

The relative importance of changes in expenditure and changes in the prices of the goods in the CBS basket would itself become one of the most important questions in poverty research. A major change in the poverty rate would inevitably raise the question of whether

it has been caused by a change in the poverty line, by a change in expenditure levels, or by a combination of both.

In this respect, the adoption of the CBS would fundamentally alter the character of poverty research, not least in comparison to the studies reviewed in subchapters 4.1 and 4.2. These studies concentrate on 'the big picture', that is, they concentrate on those aspects of social and economic policy which determine the character of a social and economic model as a whole. Especially studies on relative poverty often use a broad-brush terminology, grouping countries into distinct models such as 'Anglo-Saxon Capitalism', 'Nordic Social Democracy', 'Continental European Christian Democracy' etc. CBS poverty research, in contrast, would raise questions of a much more practical, 'hands-on' type. Big-picture questions like whether a country should adopt 'Anglo-Saxon Capitalism' or 'Nordic Social Democracy' would be relatively unimportant. 'Bread-and-butter' questions like what has led to the increase in rent levels and energy bills in the UK would come to the fore instead.

The reason for this change in focus is that a CBS poverty agenda, which concentrates on the determinants of basic living costs, could be quite easily compatible with a range of economic and social models. Even if e.g. the British land use planning system was radically reformed, it would not turn the UK into a fundamentally different economic model.

Another salient feature of the research discussed in Chapter 4 is that it is chiefly concerned with universal drivers of poverty. The policy recommendations that follow do not differ from country to country, or over time. In this respect, too, a CBS poverty agenda would be radically different. It would be a highly country-specific and time-specific agenda, with little relevance even for neighbour countries or prior decades. As mentioned, a British CBS agenda would have to focus heavily on housing costs, as this is the cost item which has shown the strongest increases. In contrast, if there was e.g. a Swiss CBS or a German CBS, the agendas built upon them would presumably pay little attention to housing costs, because these are simply not a large issue in these countries (*The Economist* house price indicators, 2012). In the UK, meanwhile, the systematic increase in house prices only began in the 1980s. If a CBS agenda had been devised before then, it would presumably have paid much less attention to housing costs than a CBS agenda devised today would have to. So even relatively similar countries could develop very different CBS agendas, and the same country could develop different CBS agendas at different points in time.

In short, a CBS poverty research agenda would in large parts focus on small-scale, practical issues that are country-specific and time-specific. In this respect, it would differ markedly from studies on the determinants of relative and absolute poverty, which focus on the universal big-picture-questions which define an economic and social model as a whole.

IFS-style simulations, which estimate the impact of hypothetical tax and welfare reforms on the poverty rate, could be continued without discernible changes. But they would have to be complimented with simulations of hypothetical reforms that would affect the level of the CBS poverty line. It would no longer be enough to show how poverty rates respond to e.g. changes in the uprating formula of the Child Tax Credit, or to changes in the eligibility criteria of Working Tax Credit. Poverty simulations would now also have to show how the poverty rate would respond to e.g. a relaxation of land-use planning restrictions, a phasing out of renewable energy obligations, a withdrawal from the Common Agricultural Policy etc.

Once such simulations were available for a large enough number of feasible policies, it would become possible to establish a cost-effectiveness ranking of anti-poverty policies, both for the population as a whole and for selected subgroups. A highly cost-effective anti-poverty agenda could then be derived, which would start with policies at the top of the ranking list, and steadily work its way down, subject to competing policy priorities. The ranking would change regularly, because most anti-poverty tools will be characterised by declining 'marginal benefits' and/or rising 'marginal costs'. If a policy tool is already being deployed extensively, then presumably, making even greater use of it will no longer have the same effect as previous increases. Policy tools that are so far underused, however, could still deliver large benefits at a low cost.

This thesis does not claim that an anti-poverty agenda which focusses on cutting basic living costs is per se superior to an anti-poverty agenda based on the use of traditional social policy instruments. But it does claim that in the UK, the latter are already being deployed extensively, while the issue of living costs has long been neglected. Under those circumstances, there is potential for devising a much more cost-effective anti-poverty strategy. The CBS developed in this thesis is an appropriate research tool for devising such a strategy.

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Annex

A1: Weekly poverty line for a household of two adults and two children, 1996-2009, in £, nominal terms

		'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09
London	lower	332	360	414	433	414	465	475	487	486	499	528	589	650	638
	middle	346	372	427	442	430	475	482	499	507	512	538	608	667	658
	upper	358	381	436	454	437	486	497	526	525	525	560	630	693	673
South East	lower	336	365	387	406	415	446	469	487	481	488	477	482	522	541
	middle	343	376	396	413	422	457	474	495	491	494	491	492	530	557
	upper	356	383	409	427	435	468	484	506	511	510	504	508	548	578
South West	lower	320	329	335	341	337	363	373	397	458	430	420	426	441	469
	middle	326	334	342	348	348	368	384	413	465	438	432	434	451	479
	upper	338	345	355	358	360	379	397	421	476	453	445	450	464	504
East	lower	280	294	309	329	343	386	393	418	439	460	440	436	465	472
	middle	292	306	320	342	361	398	403	427	450	465	449	444	478	485
	upper	299	313	328	350	370	409	412	441	463	477	458	460	495	497
East Midlands	lower	284	296	299	311	319	332	350	369	381	390	367	367	382	419
	middle	291	302	304	320	326	344	358	377	390	393	378	375	398	432
	upper	303	310	314	328	335	352	367	385	415	403	391	390	422	449
West Midlands	lower	308	312	323	338	339	376	400	394	394	396	392	399	424	434
	middle	319	324	333	350	351	387	404	400	405	402	400	408	437	446
	upper	330	338	346	360	364	402	420	416	417	411	413	420	458	460
Yorksh. & Humber	lower	294	305	313	321	313	329	332	358	359	390	385	396	427	438
	middle	299	311	320	326	329	335	338	366	371	396	391	404	439	446
	upper	308	321	330	332	336	343	352	384	384	404	407	422	453	464
North West	lower	281	302	324	327	334	348	332	351	350	375	389	395	416	426
	middle	289	308	328	336	339	358	340	361	363	380	395	402	425	439
	upper	305	318	339	346	353	371	350	373	375	390	404	416	443	456
North East	lower	296	282	293	309	324	344	337	351	361	394	394	403	420	417
	middle	303	287	298	318	328	354	343	357	366	398	399	409	426	426
	upper	312	295	307	324	336	362	354	365	385	409	410	420	436	440
Wales	lower	308	310	334	364	376	389	384	396	399	402	397	409	432	454
	middle	314	315	340	369	381	395	395	409	404	408	404	413	445	462
	upper	319	324	363	377	391	401	406	424	417	429	414	427	455	478
Scotland	lower	337	354	369	380	385	407	416	437	421	445	434	424	445	482
	middle	346	361	379	391	396	416	422	445	438	451	442	434	456	492
	upper	364	371	393	402	404	426	437	460	456	463	446	447	467	511
Northern Ireland	lower	264	277	279	278	283	320	307	312	315	330	323	334	363	374
	middle	269	283	285	284	288	326	318	318	321	337	332	350	373	381
	upper	281	293	297	295	299	337	329	332	333	345	340	362	385	394

A2: Weekly poverty line for a household of two adults and one child, 1996-2009, in £, nominal terms

		'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09
London	lower	257	278	321	335	316	357	364	373	372	379	411	459	508	498
	middle	267	287	330	342	326	364	370	382	387	390	419	471	520	511
	upper	275	294	337	351	331	373	381	401	400	400	435	488	539	524
South East	lower	258	281	298	312	315	342	356	371	365	370	368	371	403	419
	middle	264	288	305	318	319	349	361	377	374	375	379	378	410	431
	upper	273	294	313	327	328	358	369	386	387	386	389	390	424	446
South West	lower	254	261	266	269	263	286	295	311	361	336	334	337	351	375
	middle	258	265	271	275	270	290	302	322	366	341	343	344	359	383
	upper	268	274	280	283	279	299	312	329	375	353	353	356	370	402
East Anglia	lower	217	227	237	254	261	293	299	321	336	352	342	336	362	367
	middle	226	236	245	264	274	303	307	327	344	356	349	343	372	377
	upper	232	242	252	270	280	311	314	337	354	366	357	354	385	386
East Midlands	lower	225	235	235	244	247	260	275	289	298	303	292	290	304	331
	middle	230	239	240	251	251	268	281	296	305	306	300	296	316	341
	upper	238	245	247	257	258	275	288	303	323	314	311	307	333	355
West Midlands	lower	257	261	272	286	282	316	335	328	327	327	328	333	355	360
	middle	265	269	279	295	291	324	339	333	335	332	335	339	365	369
	upper	274	279	289	302	300	335	350	344	345	339	345	349	380	381
Yorksh. & Humber	lower	234	245	249	255	246	259	263	284	283	307	311	318	344	353
	middle	238	249	255	259	255	264	267	289	291	312	316	324	354	360
	upper	245	256	262	264	260	271	277	303	302	319	328	337	364	374
North West	lower	227	243	263	267	267	281	264	280	278	297	316	321	340	349
	middle	233	247	266	273	271	288	271	289	287	301	321	326	348	358
	upper	244	255	274	281	281	298	279	298	296	308	329	336	361	371
North East	lower	234	224	231	242	248	269	263	272	280	303	311	318	333	331
	middle	239	227	235	248	251	275	267	277	284	307	316	322	338	338
	upper	246	233	241	253	257	282	276	283	296	315	324	330	346	350
Wales	lower	242	244	268	289	293	307	303	311	312	312	313	319	340	358
	middle	247	248	273	293	296	311	311	320	315	317	318	322	350	364
	upper	251	254	287	299	304	317	319	330	325	330	326	333	357	377
Scotland	lower	261	272	284	291	291	310	318	335	322	337	335	326	344	372
	middle	267	278	292	299	299	318	323	341	333	342	342	333	352	380
	upper	280	285	301	307	304	325	335	352	346	351	345	344	360	395
Northern Ireland	lower	211	221	223	219	218	258	246	247	251	261	261	269	294	304
	middle	215	226	227	224	222	262	254	252	256	267	267	281	302	310
	upper	224	233	236	232	230	271	263	262	264	273	275	289	311	320

A3: Weekly poverty line for a household of two adults without children, 1996-2009, in £, nominal terms

		'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09
London	lower	179	193	226	236	226	247	253	259	258	258	292	328	363	355
	middle	186	200	232	241	232	252	258	264	267	266	298	336	371	361
	upper	191	206	237	247	236	259	265	275	274	274	308	346	382	371
South East	lower	184	200	214	223	970	243	250	260	256	257	265	265	289	302
	middle	187	204	218	227	985	247	254	265	263	261	271	271	295	309
	upper	193	208	222	233	243	252	260	271	270	268	278	279	305	319
South West	lower	191	197	200	202	203	213	221	229	269	246	253	255	265	285
	middle	194	200	204	206	206	216	224	235	273	249	258	259	271	291
	upper	200	206	210	212	212	223	232	241	279	257	266	269	280	304
East Anglia	lower	151	157	162	177	185	198	202	221	230	241	240	234	254	256
	middle	157	163	168	182	192	204	207	224	234	244	245	239	260	263
	upper	161	167	172	186	197	211	213	231	242	251	252	246	268	270
East Midlands	lower	161	169	168	174	178	185	196	206	210	211	210	208	219	236
	middle	164	172	171	177	181	189	200	211	215	213	217	213	226	243
	upper	168	177	177	182	187	194	205	216	226	219	225	221	237	253
West Midlands	lower	190	193	202	214	215	233	246	239	238	235	241	244	260	262
	middle	194	197	206	219	220	238	249	243	242	239	246	249	267	268
	upper	200	204	213	224	226	245	255	250	250	244	254	257	276	277
Yorksh. & Humber	lower	166	177	178	181	180	182	185	200	198	214	225	231	249	254
	middle	170	180	181	184	184	186	189	204	203	218	229	235	254	259
	upper	174	184	186	188	188	191	194	213	210	224	237	243	262	270
North West	lower	165	175	192	197	199	204	188	200	196	208	231	236	250	257
	middle	168	178	194	200	202	207	193	206	201	211	235	238	255	262
	upper	175	183	200	205	209	214	199	213	207	217	241	245	264	271
North East	lower	176	168	171	179	185	200	194	198	206	220	235	240	251	249
	middle	180	170	174	182	187	202	197	202	209	222	238	243	255	254
	upper	183	174	177	186	192	207	203	207	213	228	245	249	261	263
Wales	lower	170	173	196	207	212	218	215	220	217	215	220	223	239	252
	middle	173	175	199	210	214	222	220	225	220	219	224	226	244	257
	upper	177	179	205	214	220	226	225	230	226	225	231	233	250	265
Scotland	lower	185	191	201	203	207	216	223	236	226	232	238	229	243	261
	middle	190	195	206	208	213	222	227	240	231	235	243	235	247	267
	upper	196	200	211	214	217	227	235	246	238	242	246	243	253	278
Northern Ireland	lower	155	162	163	157	160	192	182	179	182	189	194	200	219	228
	middle	158	166	166	161	163	195	187	182	187	193	199	209	224	233
	upper	164	171	171	167	169	201	193	188	192	198	205	215	231	240

A4: Weekly poverty line for a single parent household with one child, 1996-2009, in £, nominal terms

		'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09
London	lower	208	227	268	281	267	301	309	315	315	321	352	398	442	428
	middle	216	234	275	286	276	306	313	321	326	328	357	407	451	439
	upper	222	239	280	292	279	312	321	336	335	336	369	419	465	447
South East	lower	221	241	258	271	278	299	314	326	320	324	322	323	352	365
	middle	225	246	263	275	282	305	317	330	326	327	330	329	357	374
	upper	232	250	270	282	289	311	322	336	336	336	337	337	366	385
South West	lower	212	217	221	224	222	240	248	263	311	285	280	283	292	313
	middle	215	220	225	228	228	243	254	271	314	289	287	287	298	319
	upper	221	226	231	233	235	249	261	276	320	296	294	295	305	332
East Anglia	lower	181	190	200	216	228	255	259	278	292	307	296	290	312	315
	middle	188	196	205	223	238	262	264	283	298	310	301	295	319	322
	upper	192	200	210	227	243	267	269	290	305	317	307	303	328	329
East Midlands	lower	186	195	195	203	210	218	232	244	252	257	245	243	253	277
	middle	190	198	198	208	213	225	237	248	257	259	251	247	262	284
	upper	195	202	203	213	218	229	242	253	270	265	258	255	274	293
West Midlands	lower	215	218	228	241	242	270	288	279	278	279	278	281	298	299
	middle	222	224	233	247	249	275	291	282	284	282	282	285	305	305
	upper	227	231	240	253	256	283	299	291	291	287	289	292	316	313
Yorksh. & Humber	lower	188	197	200	204	201	208	213	232	232	252	254	260	281	287
	middle	191	200	204	207	209	211	215	236	238	256	258	264	288	291
	upper	195	205	209	210	213	216	223	245	245	261	266	273	295	301
North West	lower	187	201	220	223	228	236	220	233	232	249	264	269	285	291
	middle	191	204	222	228	230	241	224	239	238	252	268	272	290	298
	upper	200	209	228	233	238	248	230	245	245	257	273	279	299	306
North East	lower	192	179	186	196	206	222	220	227	236	259	262	266	276	271
	middle	195	182	189	201	208	227	223	231	238	261	265	269	279	276
	upper	200	186	193	204	212	231	228	235	249	267	270	274	285	284
Wales	lower	206	205	229	248	257	266	261	268	269	269	267	271	288	303
	middle	209	208	232	251	260	268	267	274	271	272	271	273	295	307
	upper	212	213	244	255	265	272	273	282	278	283	276	280	300	315
Scotland	lower	215	224	236	241	246	260	267	283	272	283	279	269	283	309
	middle	220	228	242	247	252	265	271	287	280	286	284	274	289	314
	upper	229	233	249	253	256	270	279	295	289	293	286	282	295	324
Northern Ireland	lower	169	178	178	174	178	211	200	198	205	214	213	221	240	249
	middle	172	181	180	177	181	214	206	201	208	217	218	230	246	253
	upper	178	186	187	183	186	220	211	209	215	222	223	236	252	260

A5: Weekly poverty line for a single adult household, 1996-2009, in £, nominal terms

		'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09
London	lower	133	143	175	183	173	191	199	201	203	201	234	268	297	284
	middle	137	148	178	186	176	194	202	204	208	205	237	272	302	288
	upper	139	151	181	189	179	198	206	210	211	209	243	278	308	294
South East	lower	147	159	173	181	186	199	208	213	211	209	216	215	235	245
	middle	149	161	175	183	188	201	210	216	215	211	220	219	238	249
	upper	152	163	177	186	190	204	213	220	219	216	224	224	244	255
South West	lower	147	149	152	153	154	163	173	177	217	190	194	195	201	218
	middle	149	151	155	155	156	165	175	181	219	193	197	198	205	222
	upper	152	155	158	159	159	169	179	184	222	197	202	203	210	229
East Anglia	lower	117	120	125	139	148	160	164	178	188	196	194	187	203	204
	middle	121	124	128	142	152	164	167	180	191	199	197	190	207	208
	upper	123	126	131	144	155	167	170	184	195	203	201	194	212	212
East Midlands	lower	124	129	128	133	137	143	155	160	167	165	164	161	168	181
	middle	126	131	130	135	139	146	158	163	169	167	168	164	172	185
	upper	128	134	133	138	142	148	161	166	175	170	172	168	178	191
West Midlands	lower	149	150	158	169	170	187	201	191	191	187	190	192	204	201
	middle	152	153	161	172	173	190	203	193	194	189	193	195	208	204
	upper	155	156	164	174	176	194	207	197	198	192	198	200	213	210
Yorksh. & Humber	lower	123	129	129	131	131	131	137	148	147	160	168	172	185	188
	middle	124	131	131	133	133	133	139	151	150	162	171	175	188	191
	upper	127	133	134	135	135	137	142	156	154	165	175	178	193	197
North West	lower	127	134	149	153	156	159	146	153	150	160	179	184	194	198
	middle	129	135	151	155	157	161	149	157	153	162	182	184	197	201
	upper	133	138	154	158	161	165	152	160	156	165	186	188	202	206
North East	lower	135	123	126	132	138	152	152	154	161	175	185	188	194	189
	middle	137	125	128	134	140	154	154	156	163	176	187	190	196	192
	upper	139	127	130	136	143	157	158	159	165	180	191	193	199	197
Wales	lower	136	134	157	166	172	177	177	177	175	172	175	175	186	197
	middle	137	136	159	168	174	179	179	180	176	174	177	176	189	199
	upper	139	138	162	170	177	181	183	183	180	178	180	180	193	204
Scotland	lower	141	144	153	154	158	166	174	184	175	178	182	173	181	198
	middle	144	147	156	157	162	169	176	187	178	180	185	176	184	201
	upper	148	149	160	160	164	172	181	190	182	184	187	181	188	207
Northern Ireland	lower	115	119	118	113	115	145	139	130	137	142	147	153	165	173
	middle	117	121	120	114	117	147	141	132	139	144	150	158	168	176
	upper	120	124	123	118	120	151	145	135	142	147	153	161	172	180

A6: Weekly poverty line for a household of two adults and two children excluding housing costs, 1996-2009, in £, nominal terms

	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09
London	191	198	204	209	203	222	222	235	240	241	235	247	266	281
South East	159	169	168	172	168	184	189	200	203	205	205	207	222	235
South West	168	173	176	179	173	184	188	204	210	213	218	218	235	245
East Anglia	153	161	164	167	162	178	184	189	197	198	199	202	219	227
East Midlands	158	162	163	168	164	177	179	190	195	195	196	196	215	232
West Midlands	166	169	170	175	168	186	188	195	200	197	203	207	228	242
Yorks. & Humber	177	181	188	192	186	198	196	205	209	219	219	226	248	256
North West	159	167	168	172	166	182	183	194	195	200	206	209	223	233
North East	164	166	170	178	174	185	175	183	184	192	199	205	223	232
Wales	156	160	157	169	164	175	179	189	186	191	196	203	224	232
Scotland	179	186	189	197	191	203	203	209	210	221	222	223	241	253
Northern Ireland	162	167	172	175	170	181	181	190	183	191	192	198	215	217

A7: Weekly poverty line for a household of two adults and one child excluding housing costs, 1996-2009, in £, nominal terms

	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09
London	191	198	204	209	203	222	222	235	240	241	235	247	266	281
South East	159	169	168	172	168	184	189	200	203	205	205	207	222	235
South West	168	173	176	179	173	184	188	204	210	213	218	218	235	245
East Anglia	153	161	164	167	162	178	184	189	197	198	199	202	219	227
East Midlands	158	162	163	168	164	177	179	190	195	195	196	196	215	232
West Midlands	166	169	170	175	168	186	188	195	200	197	203	207	228	242
Yorks. & Humber	177	181	188	192	186	198	196	205	209	219	219	226	248	256
North West	159	167	168	172	166	182	183	194	195	200	206	209	223	233
North East	164	166	170	178	174	185	175	183	184	192	199	205	223	232
Wales	156	160	157	169	164	175	179	189	186	191	196	203	224	232
Scotland	179	186	189	197	191	203	203	209	210	221	222	223	241	253
Northern Ireland	162	167	172	175	170	181	181	190	183	191	192	198	215	217

A8: Weekly poverty line for a household of two adults without children excluding housing costs, 1996-2009, in £, nominal terms

	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09
London	128	132	136	140	138	145	145	152	155	153	158	165	178	186
South East	107	113	113	116	870	121	122	130	132	131	138	140	151	159
South West	119	123	125	126	125	128	130	137	142	143	154	155	168	176
East Anglia	101	105	106	108	106	108	113	118	122	122	130	131	142	148
East Midlands	105	108	107	109	108	113	115	123	123	121	130	130	142	152
West Midlands	113	115	117	120	119	125	125	130	132	129	138	141	155	164
Yorks. & Humber	119	123	125	128	126	131	129	133	134	141	148	154	166	173
North West	107	112	113	115	115	119	120	128	125	127	139	141	151	158
North East	113	115	116	120	119	121	116	119	119	120	135	139	152	159
Wales	101	105	107	111	109	113	114	120	116	118	126	130	144	150
Scotland	120	123	125	128	128	131	132	137	134	140	149	149	159	167
Northern Ireland	110	113	116	117	115	122	121	127	122	125	130	134	146	149

A9: Weekly poverty line for a single parent household with one child excluding housing costs, 1996-2009, in £, nominal terms

	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09
London	140	144	150	153	153	164	164	174	178	180	173	183	198	209
South East	120	127	127	130	131	140	145	153	155	158	156	157	168	178
South West	125	127	130	132	131	136	141	153	158	161	161	162	174	181
East Anglia	115	120	124	126	126	137	141	144	151	152	151	154	166	172
East Midlands	118	120	121	126	126	133	135	143	147	148	147	147	161	174
West Midlands	122	124	123	127	126	137	140	144	149	147	150	153	168	178
Yorks. & Humber	130	132	137	140	140	145	144	151	156	163	161	166	182	187
North West	118	124	124	127	126	135	136	145	147	151	153	155	165	173
North East	120	120	124	131	131	136	131	137	138	146	149	152	164	170
Wales	118	120	117	127	127	133	135	143	142	146	149	153	170	174
Scotland	131	137	139	146	144	150	150	155	158	166	164	165	178	187
Northern Ireland	118	123	126	128	128	133	133	140	136	142	142	147	159	159

A10: Weekly poverty line for a single adult household excluding housing costs, 1996-2009, in £, nominal terms

	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09
London	79	79	82	84	83	87	89	92	95	92	97	101	109	113
South East	69	70	71	72	72	75	78	81	84	82	87	88	94	99
South West	74	74	75	76	75	76	80	82	88	86	93	94	101	107
East Anglia	65	66	66	67	66	68	72	73	78	77	82	82	89	93
East Midlands	66	67	66	67	66	69	73	75	78	75	81	80	88	94
West Midlands	71	70	71	73	73	77	80	80	83	79	85	87	95	101
Yorks. & Humber	74	74	75	77	75	78	79	80	81	85	90	93	100	104
North West	67	68	69	71	70	73	75	78	77	78	86	87	93	97
North East	70	70	70	72	72	73	72	72	73	74	84	86	94	97
Wales	65	66	67	69	68	70	74	74	72	73	79	81	89	93
Scotland	74	75	76	77	77	79	82	83	81	85	91	90	96	101
Northern Ireland	68	69	70	70	69	74	76	77	74	76	81	83	90	92

A11: The Food Basket: Canadian MBM and CBS

MBM	quantity	CBS
2% Milk	10.45l	Shop milk, semi-skimmed, per 2 pints/1.136 litres
Yoghurt, fruit. 2% BF	230g	Yoghurt/fromage frais (small individual)
Cheddar cheese, medium	245g	Cheese Cheddar, Home produced, per kg
Processed cheese slices	275g	
Mozzarella cheese, 16.5% BF	365g	
Vanilla ice cream, 10% BF	930ml	Ice cream specify flavour
Grade A large	12	Large, free range,
Round steak	500g	Home killed beef, Stewing Steak, per kg
Boneless stewing beef	210g	
Ground beef, medium	655g	Home killed beef, best mince, per kg
Pork chops, loin	400g	Home killed Pork, loin chops, with bone, per kg
Chicken legs, no back	1.34kg	Fresh boneless chicken breast per kg
Wieners, beef and pork	165g	Cooked ham, loose, spec type (per 100g)
Sliced ham, 11% fat	335g	
Frozen fish fillets	200g	Frozen Fish Fingers
Pink salmon, canned	115g	Frozen Prawns
Tuna, canned, in water	65g	Canned Fish, Tuna, specify oil/brine/water (180-200g)
Baked beans, tomato sauce, canned	330ml	Baked Beans (415-420g tin)
White beans, dry	80g	
Bread, enriched, white	1.4kg	Large loaf, white, unsliced, 800g
Bread, whole wheat	1.4kg	Large wholemeal, sliced loaf
Hot dog/hamburger rolls	18	6 Bread Rolls White/Brown
Flour, all purpose	655g	Flour, self-raising 1.5kg
Flour, whole wheat	165g	
Rice, long-grained, white, parboiled	550g	Basmati rice 500g
Spaghetti/macaroni, enriched	755g	Dry spaghetti or pasta 500g
Macaroni/cheese dinner, dry	155g	
Oatmeal, regular/quick-cooking	55g	
Corn flakes	345g	Breakfast Cereal 1 unsweetened
Shreddies	345g	Breakfast Cereal 1 sweetened/chocolate coated
Soda crackers	205g	Cream Crackers, packed 200g
Social teas	455g	Tea bags , packet of 240 (approx 750g)

A11: The Food Basket: Canadian MBM and CBS (continued)

MBM	quantity	**CBS**
Oranges	710g	Oranges, class 1, each
Apple juice, canned, vitamin C added	1l	Apple Juice, 1 litre carton
Orange juice, frozen concentrate	330ml	Concentrated fruit drink e.g. orange (1 litre)
Tomato juice	165ml	
Tomatoes	560g	Fresh-veg, Tomatoes, per kg
Whole tomatoes, canned	240ml	Canned Tomatoes, approx 390-400g
Apples	1.8kg	Apples, dessert (per kg)
Bananas	2.3kg	Bananas, (per kg)
Grapes	480g	Grapes, (per kg)
Pears	755g	Pears, dessert (per kg)
Raisins, seedless	100g	Canned Fruit, 400-450g. (Specify type)
Fruit cocktail, canned in juice	335ml	
Potatoes, fresh	5.5kg	Potatoes - new - loose per kg
French-fried potatoes, frozen	615g	Frozen Chips (908g approx)
Broccoli	585g	Fresh Veg - Broccoli (per kg)
Cabbage	255g	Fresh Veg - Cabbage-whole-per kg
Carrots, fresh	885g	Fresh Veg - Carrots-per kg
Celery	345g	
Cucumber	455g	Fresh Veg - Cucumber (whole)
Lettuce, iceberg	450g	Fresh Veg - Lettuce - Iceberg
Lettuce, romaine	595g	
Onions	740g	Fresh Veg - Onions - per kg
Green peppers	305g	Fresh Veg - Peppers - state loose or per kg
Kernel, corn, canned	565ml	Canned Sweetcorn (198-340g)
Green peas, canned	215ml	Frozen Garden Peas (900g-910g)
Margarine, tub, non-hydrogenated	365g	Margarine/low-fat spread, 500g
Butter	190g	Butter, Home produced, 250g
Canola oil	230ml	Olive Oil - 500ml - 1 litre
Salad dressing (mayo type <35% oil)	195ml	Mayonnaise (400g-500g)
Sugar, white	845g	Sugar - Granulated, white, per kg
Strawberry jam	155ml	Jar of jam, 340-454g, specify flavour